The OIL WEEKLY

A Journal for
Oil and Gas Producers and Field Men

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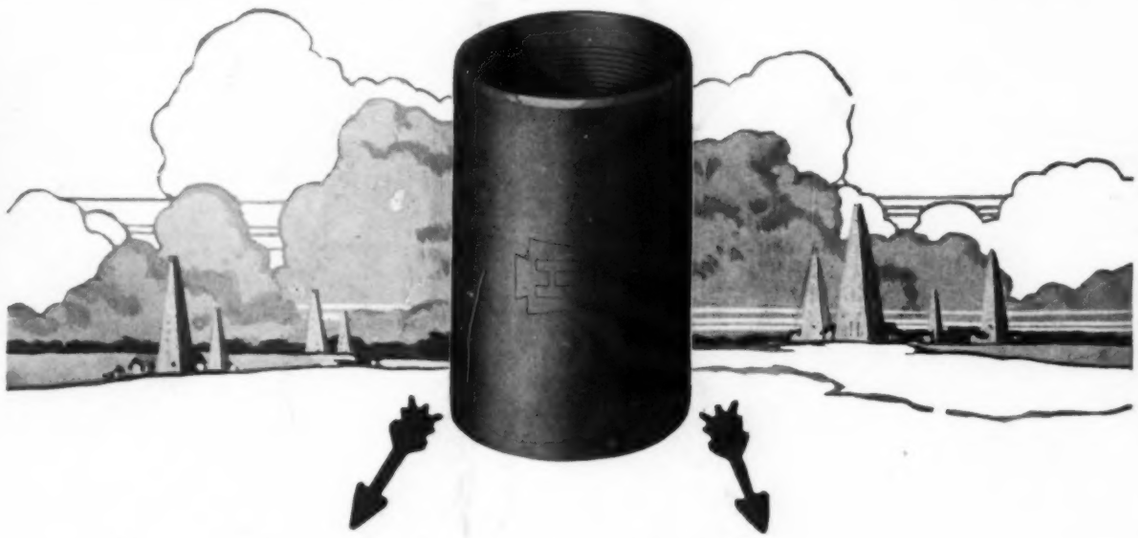

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NEW YORK - LONDON - TAMPICO - PITTSBURGH, U.S.A. - SAN FRANCISCO - LOS ANGELES

World's Largest Manufacturers of Oil Field Equipment

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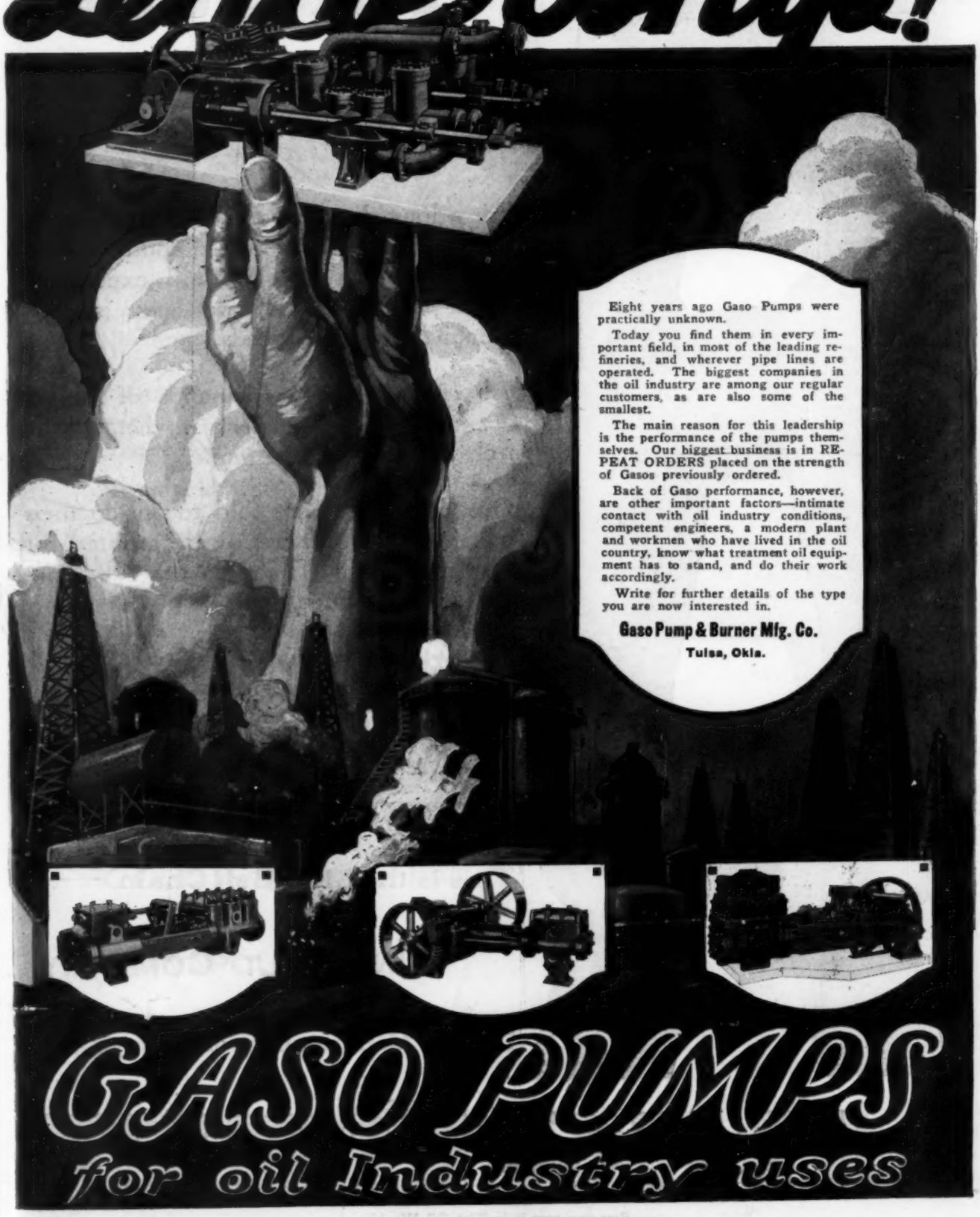
Leadership!



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for oil Industry uses

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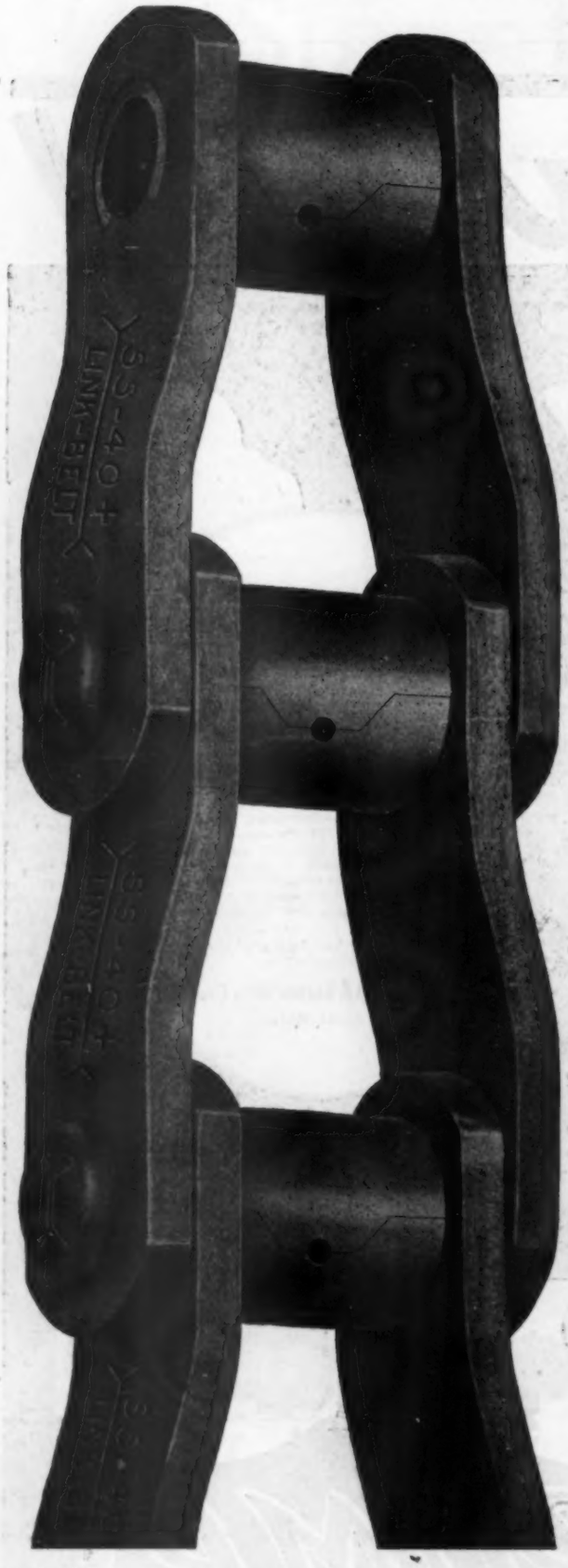


The "SS" Now For Super SS-40+

For a long, long time everybody thought SS-40 and SS-124 were just about as good drilling chains as skill and experience could produce. They met heavy service demands and high speeds.

Then the strenuous demands of *Super-speeds* and *Super-strains* dictated the need for *Super-Chains*.

Our designers were told to out-do their own records. Markets were scoured for raw materials. The need existed, Link-Belt must produce.

Tests now prove that—

SS-40 PLUS—a genuine super-chain—fears no speeds at which a rig is run, as it contains 60 per cent more strength than our famous SS-40.

This is the Link-Belt Chain

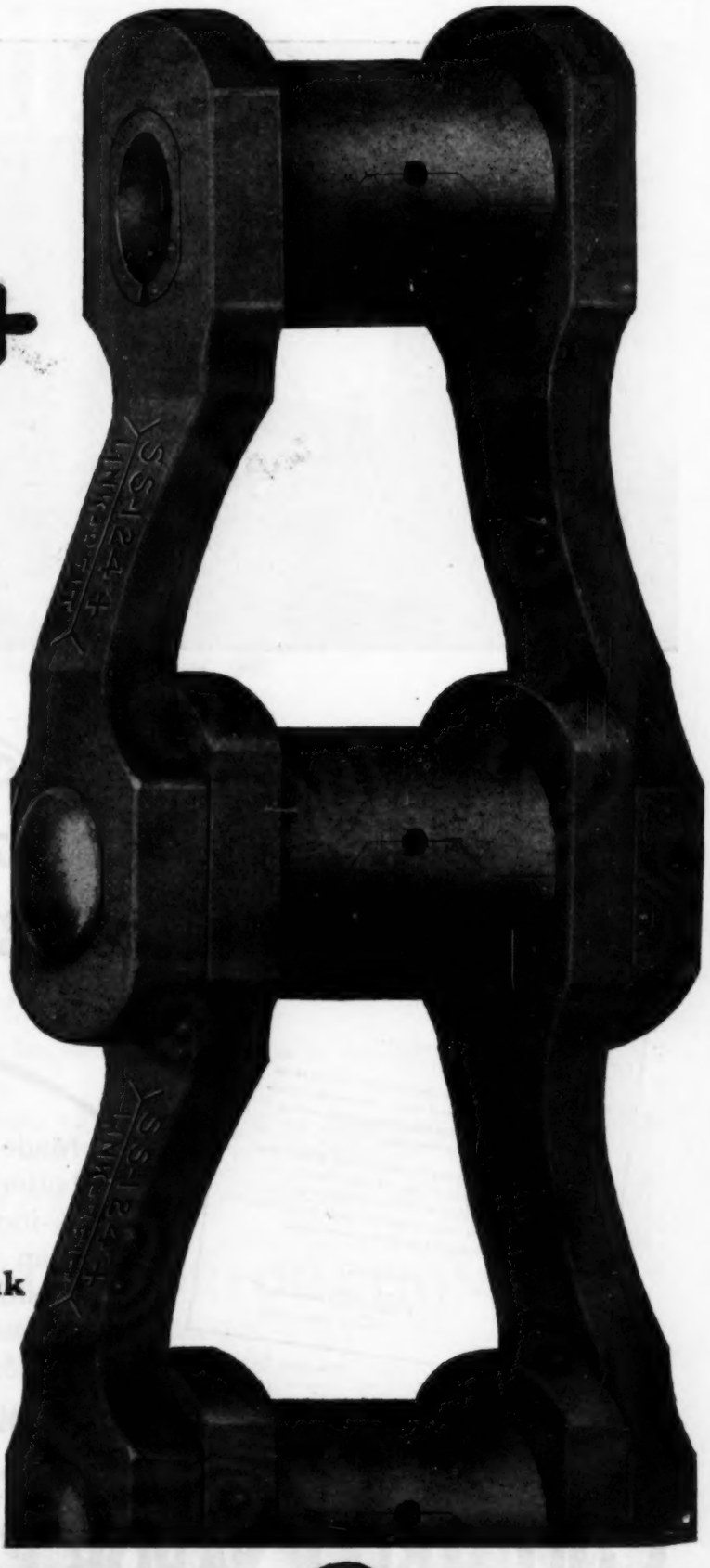
LINK-BELT COMPANY,

Leading Manufacturers of Conveying and

LINK-BELT

Say you saw it in The Oil Weekly

Stands Service SS-124+



And SS-124 PLUS is 73 per cent stronger than SS-124.

Tests prove that designing skill of the best—experience of the longest—especially selected materials, and unusual heat treating—have given us chains of record strength *without increase in weight.*

These newest, most rugged of chains are no heavier than the famous SS-40 and SS-124—but boast great increases in reserve strength.

Test them on your next job—and *you* will find that "SS" stands for *Super-Service.*

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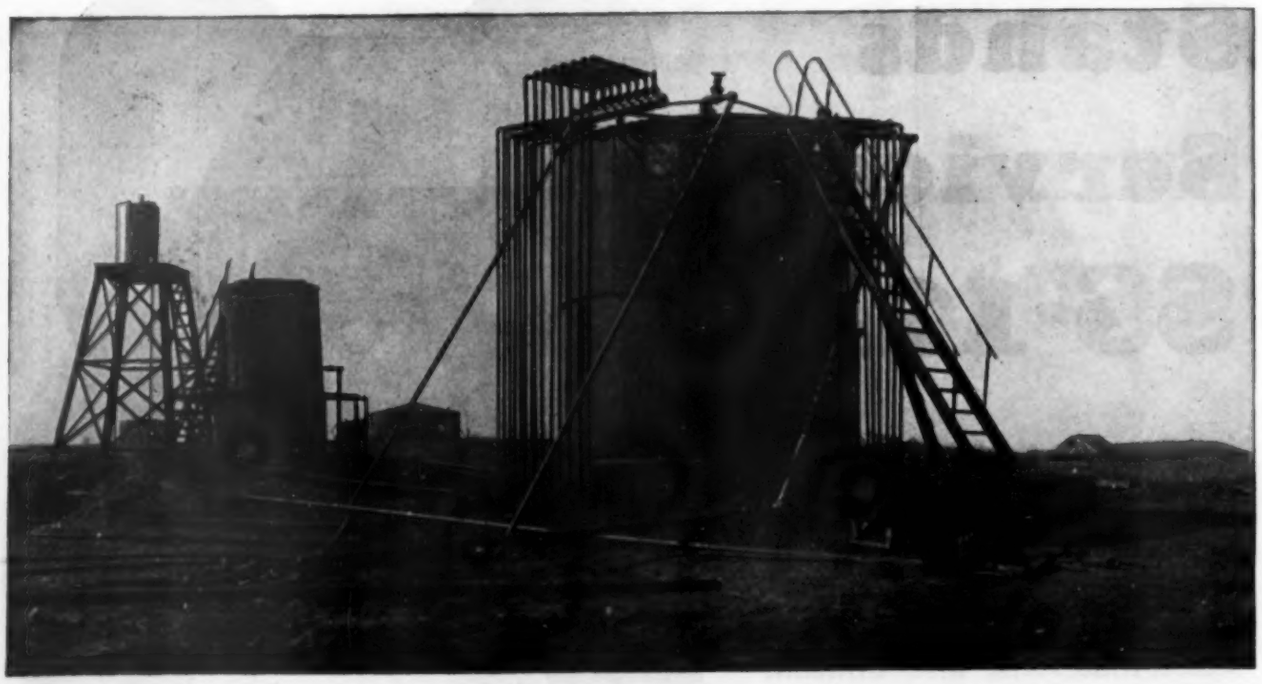
Mark. Look for it on every link

INDIANAPOLIS

Power Transmission Chains

SPROCKET CHAIN

Say you saw it in The Oil Weekly



THE COLINE OIL CO

Ardmore, Oklahoma

April 2, 1924

Service Tank Company
Ardmore, Oklahoma

Attention, Frank McPhail,
Representative of Columbian Steel Tanks

Dear Sir:

The 500 barrel Hi-Pressure Steel Tank recently sold us has proved satisfactory in every respect. We have at this date 26 wells pumping into this tank, making, on the average, 500 barrels of oil going thru same.

We are selling to the Pure Oil Gasoline Plant 250,000 cubic feet of gas daily which is also going thru this tank. In addition, the gas which we are using to drill a deep test well is going thru the above mentioned tank. We are carrying at present two pounds gas pressure on this tank.

Yours truly,

Bert Warner
General Superintendent

"carrying two pounds gas pressure"

Made of 12 guage steel throughout—bottom, sides and deck. Bolted with ½-inch bolts. Trussed deck. More than ample interior reinforcement. Positive pressure and vacuum relief valves. The Columbian is a genuine Vapor Pressure Tank in every detail.

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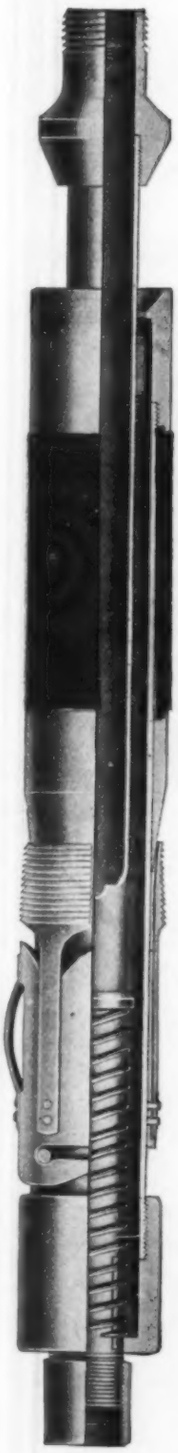
Oil Field Tanks
Bulk Station Tanks
Underground Tanks

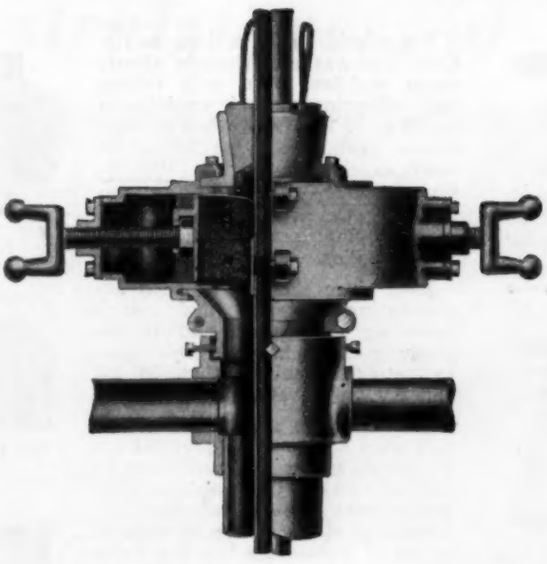
Floating Tank Decks
Barrels, Buckets
Carrying Cans, Funnels

Faucets, Valves
Oil and Gasoline Pumps
Plates, Sheets, Angles

Say you saw it in The Oil Weekly

The Scientific Method For Packing Flowing Wells





A complete system has been perfected for packing flowing wells.

The GUIBERSON Control Head Packer, while an improved all-purpose packer, was especially designed for use in flowing wells, as when open it has an ample passageway between tubing and packer to permit free upward flow of oil and gas. It has been run successfully in wells flowing 2500 barrels.

Only when the packer has reached position and is set does the top valve close.

The GUIBERSON Tubing Oil Saver is used at the casinghead when running this packer in a flowing well, as it prevents loss of oil.

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GUIBERSON

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Jarecki

Regrinding Globe Valve

Standard Iron Body Gate Valve

Jarco Brass Gate Valve

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Ever since then we've been accumulating designing and manufacturing experience, and in no products do we use this experience to better advantage than in oil country valves and fittings.

Jarecki valves are made in styles and sizes to meet the severest oil or gas pressures you ever have to put up with. Gate valves, furnished with double discs and stationary steel stems, can be repacked under pressure when the valve is wide open.

Any oil field valve requirement can be met from the Jarco line.

Jarecki Fittings have toughness built into them. They are carefully manufactured, thoroughly tested, and made in a variety that insures a part exactly suited to your needs.

You can't go wrong by looking for the trade-mark "J" that marks all Jarecki products.

Oil Country Cock

Cast Iron Tee

Malleable Iron Elbow

Jarco Union

"Everything used or needed

Trade J Mark

about an oil or gas lease"

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—and Fittings

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—*for straightness of Tubing*

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World's Largest Makers of Genuine Wrought Iron Pipe

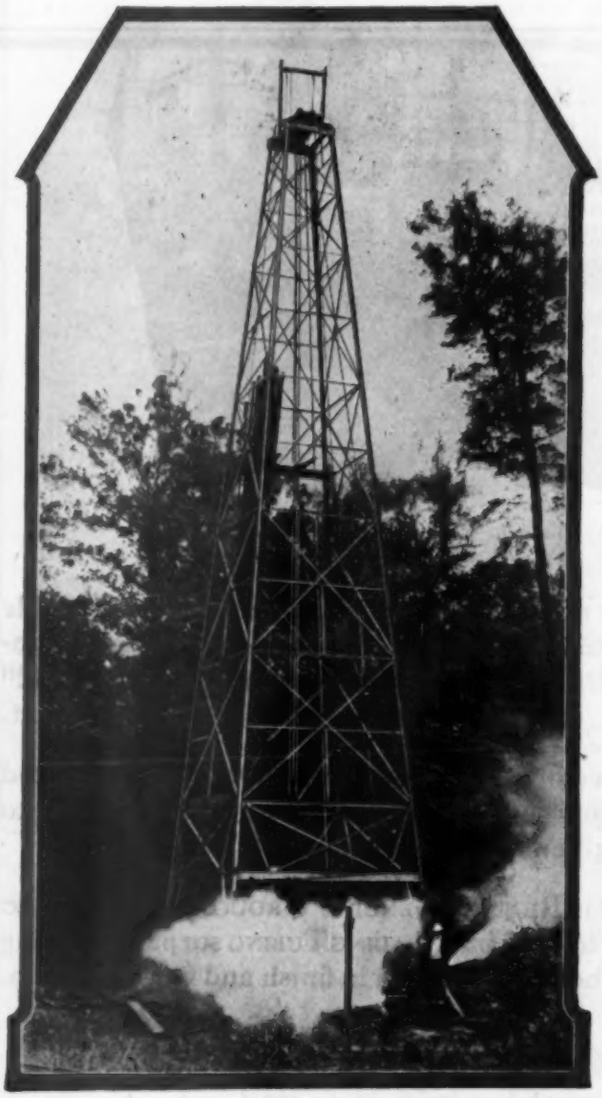
READING PIPE

GENUINE WROUGHT IRON

Say you saw it in The Oil Weekly

International Steel Derricks

(GALVANIZED)



Their First Cost Is the Last Cost

THE PRODUCER of today recognizes the superiority and economy of the Steel Derrick. As the old wooden Derricks blow over or become unfit for use, he is replacing with steel. His problem it is, therefore, to learn the advantages of one type of steel derrick over another.

Up-keep is one big factor in the production of oil. Rust or corrosion is the cancer of metal. Unless a derrick be galvanized it must be painted at least every two or three years. The experience of such Oil Companies as have kept accurate records show that the additional cost of IDECO GALVANIZED Derricks of structural steel is equalled by the first or second painting cost. Additional paintings are an Expense, recurring again and again.

INTERNATIONAL Structural Steel Derricks are galvanized by a special "IDECO" Hot Dipped Process which not only coats but becomes an integral part of the metal itself, making it safe for all time against corrosion.

"IDECO" Derricks are made in sizes and capacities for all types of oil and gas production. Write for catalogs on Derricks and other "IDECO" Equipment.

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The International Derrick & Equipment Co.

Columbus, Ohio — Los Angeles Cal.

Branch Offices and Warehouses:

TULSA HOUSTON SHREVEPORT TAFT CASPER

The Largest Company Devoted to the Manufacture of Steel (Galvanized) Equipment for the Oil, Gas and Artesian Industries.

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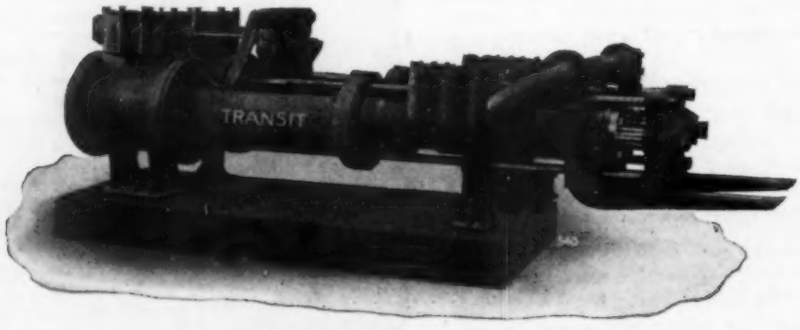
(Guide to Purchasers, Pages 97-98)

IT'S MUCH EASIER AND CHEAPER

to take a thin cut off a plunger of a plunger pump than it is to rebore a cylinder of a piston pump. Yet these operations must be performed when considerable wear occurs. So where the conditions are severe, or the material pumped contains more or less grit, the natural solution is to specify a plunger pump.



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are made with extra long plunger stuffing boxes so that only a very light pressure is needed to pack the stuffing boxes tight. This is easy on the packing and easy on plungers.

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Something More on the Situation

By R. L. Dudley

Consumption of gasoline over the United States for the first fifteen days of June has shown a decided increase over the same period last year and the consumption for May and for the first five months of 1924, as compared with the same period last year is from 15 per cent to nearly 40 per cent higher, according to telegrams received by The OIL WEEKLY on Wednesday of this week from a large number of the biggest marketing organizations in the United States.

The accompanying review shows that if the producer will do his part, consumption will do the rest. Consumption can not do it all. Unless the producer does do his part, he can expect what he will get.

With the crude oil market in a weakened condition, the only hope against a price cut is hung upon two things—production and consumption. With production running several thousand barrels higher this week than last week, only a quickening of consumption can be expected to hold the crude market.

"How is consumption running?" is a question that everyone in the oil industry is vitally interested in, and to solve that question The OIL WEEKLY wired twenty of the biggest marketing organizations in the United States on Tuesday, asking if they would telegraph a report on how their sales were running over certain periods of this year as compared with the similar periods last year.

The answer was little short of astounding.

We had believed that consumption was greater this year than it was last year, but we had not the slightest idea that it was as great as it developed it really was.

The answer to the telegrams brings a ray of hope to the producer, as well as to the refiner and marketer—but it must not be forgotten for one moment that the record breaking consumption we are now having will not hold the market unless drastic steps are taken immediately to hold crude production down.

In conversation with oil men early in the week we were met with the assertion that the market must be cut now or the industry will suffer a much greater loss through a crash in the market structure in the fall or winter. "Only a surprise in consumption can save that catastrophe, and production must be curtailed in any event unless we enter winter in bad shape," said one authority.

So in presenting the facts on the consumption situation which will follow we must emphasize that our record breaking consumption is a life preserver that has been thrown to us, and that we must not puncture it by continuing to pile up production at an increasing rate.

The companies who received the wire from The OIL WEEKLY are selling the bulk of the gasoline sold in the United States. The answers came from a great majority of the companies to whom we telegraphed and we wish to extend out thanks to them for their quick response. These companies are located from the West Coast to the East Coast, and from the Canadian border to the Rio Grande.

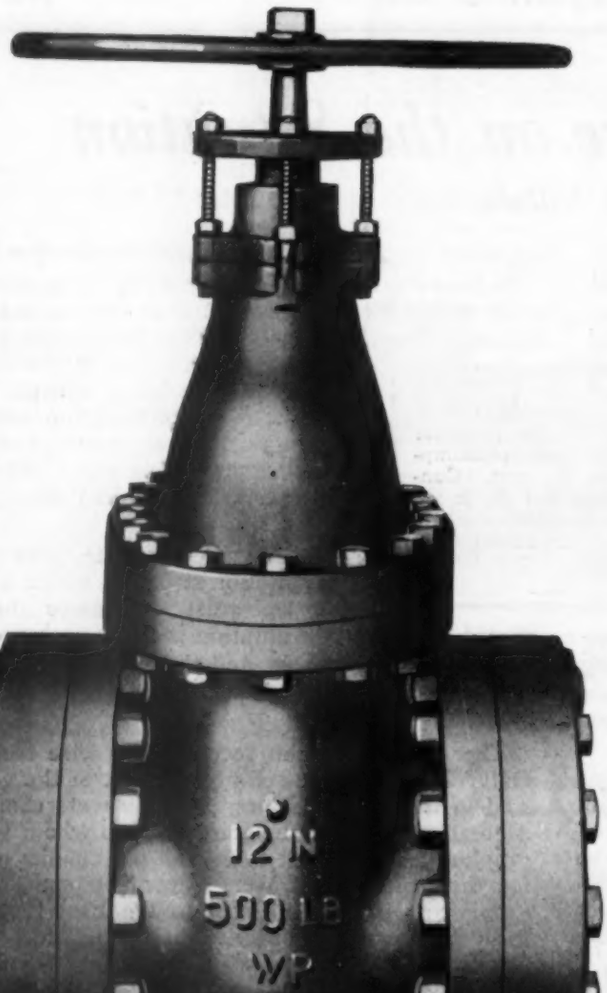
The universal answer was that consumption this year has broken all previous records. From 15 to 39½ per cent, is the way the increase is running, according to the executives of these companies—and they may be said to be representative in every respect.

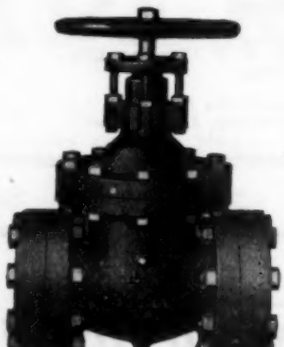
Maybe it is best to let the telegrams on the next page tell the story. Many of the companies asked that their names be omitted for reasons that are obvious, so in fairness to the remainder all names are omitted.

The OIL WEEKLY wants only such subscribers as are engaged in the oil producing or pipe line business, or sub-branches of the producing and pipe line business. It has no desire for investor circulation, and it reserves the right and will exercise the right to reject subscriptions coming from persons whose interest in the oil industry is through the purchase of oil stock.

R. L. DUDLEY, Publisher.

WESTCOTT





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Valves of every size and every pressure required for pipe line and refinery use are offered by WESTCOTT. We also offer a complete line of Special Steel Drilling Gates and of Liquid Safety Valves. Every valve bearing the name "WESTCOTT" will be found to be a highly perfected mechanical product. Satisfactory service alone explains their extensive and growing use throughout the Oil Industry.

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VALVES

Say you saw it in The Oil Weekly

What Marketer Statements Tell About Consumption So Far This Year

THE following telegrams from marketers in response to a request as to just how consumption is stacking up this year as compared with 1923, show that sales during the first 15 days of June as well as during the preceding 5 months is from 15 to 39 per cent higher than was the case in the same period last year. The telegrams represent companies whose territories go to make up the major part of the country's gasoline consuming trade.

Here is one from a company that is one of the biggest marketers of gasoline in the East, the South and Southwest, a company that operates its own stations and sells through dealers as well. It is a concern that is noted for the thoroughness of its organization and its knowledge of its business:

"Our increase in gasoline sold for the first five months of 1924 as compared with the first five months of 1923 is 39½ per cent. The increase in May, 1924, over May, 1923, is 39 per cent. The increase for the first 15 days of June, 1924, as compared with the same period in 1923 is 33 per cent, the falling off being due to rainy weather in large part of territory covered."

Which isn't so bad!

Another big company which operates in the Southwest, and which is considered as one of the biggest factors in that section, wired:

"Unable to furnish information on sales first 15 days June, as these figures are not available until after July 1. May sales show increase 27 per cent as compared to May, 1923."

And that isn't so bad, either!

Another company operating in the same section, which, however, is very much restricted in its sales, reports a gain of only 2.5 per cent for May, 1924, as compared with May, 1923, but the sales manager of the company, who answered the inquiry, stated that the company's sales seldom vary from month to month.

From one of the biggest companies on the West Coast, and incidentally one of the biggest in the United States, comes this heartening telegram:

"Replying your telegram. Impossible to furnish intelligent estimate of June gasoline sales to June 15 owing to remoteness of many of our distributing units. Our gasoline sales for first five months of this year as compared with same period of last year show approximate gain 25 per cent."

And this in face of the foot and mouth disease scare of a few weeks back!

From a South Carolina jobber this answer came:

"Sales gasoline June 1st to June 15 this year as compared with last show 23 per cent increase. Sales May, 1924, as compared with 1923, show 27 per cent increase. Do not believe this increase due entirely to increase consumption, but great part, we believe, due to our intensive advertising and pushing premium oil also our new filling stations."

But here is what another live jobbing company in the same geographical section of the country has to say:

"Sold 27 per cent more gasoline in May this year than in May last year. June 1st to June 15 increase 12 per cent. Rained most every day during first half of June. Expect to have around 25 per cent more this year if weather is favorable."

Running on further up the coast is a company which is one of the big factors in gasoline marketing in the East.

Here is a wire from an executive of that company: "Increase in our gasoline sales for domestic trade first five months this year 21 per cent over sales for first five months last year. This includes sales to jobbers and through our own stations."

CONDENSED U. S. PRODUCTION

	Past Week	Prev. Week
Mid-Continent (Oklahoma, Kansas, North Texas	898,820	787,378
California	631,450	625,650
Oklahoma	461,635	453,110
Texas	378,270	371,580
Mountain States	126,650	127,800
Arkansas	153,510	167,495
Eastern States	106,000	106,000
Kansas	73,965	74,895
Louisiana	62,995	60,700
Total	1,994,475	1,987,233

(Detail figures on page 52)

And here is one from another of the real powers in the gasoline business—one of the top notchers that can't be located by any one, two or three geographical sections. And it's the kind of record that makes you want to put the company's name over it, just to give honor where honor is due:

"Our sales for the first five months of 1924 as compared with same period last year show 36 per cent gain this year. May, 1924 sales show increase of 28 per cent."

Coming from the Middle East and the Middle West, and from an aggressive major company whose name is known to every oil man, is this wire:

"My best judgment in territory where we operate is May gasoline sales this year about 15 per cent higher than May last year. Too early to make estimate on June further than first week for which estimate 10 per cent above first week June last year."

From the center of the Corn Belt, comes this message:

"Our gallonage for months of May and June running about 15 per cent greater than last year in spite of the worst weather this country has experienced in ten years."

That is the story of the telegrams. The weather in June, in most sections of the country has been far from ideal. What then, is the answer to this increased consumption.

Nothing, brother, but the fact that there are more automobiles running and there will be more running all through the summer than ever before.

The tank car people keep pretty well posted on the general situation through the demand for cars. Here is what two tank car manufacturers have to say in response to a query:

"As you know weather conditions in Northern territory has been very unfavorable for petroleum products, which naturally reflects on the tank car situation. However the demand recently has been steadily increasing both for clean and fuel oil cars and with continued warm weather should be much more satisfactory from now on.

David Copland,
First Vice President,
General American Tank Car Co.,
Chicago.

Here is the other:

"Our records show that refiners are moving cars they have under lease from us more actively than they did two weeks ago, although the notices received here of forwarding are not complete enough covering the entire equipment to give us a definite percentage of increase. Practically all of our equipment is leased and we understand that other car leasing companies are in like position. So far as the reflection in our business goes it would only replace cars that are coming from expiring leases.

"We are of the opinion that there are plenty of cars in the country today to handle the ordinary business, and we find inquiries for new cars are scarce.

North American Car Company,
By Erwin R. Brigham,
Vice President."

E. W. Marland of Poca City, Oklahoma, president of the Marland Oil Company, in a statement made during the week said:

"There is nothing wrong with the oil business. It is the fellows who are in it who are wrong.

"Consumption continues to increase and oil seems easy to find just now. I can see no reason to worry about the oil business three or four years from now when oil may be much harder to find and we may be unable to meet the demand. Everyone is worrying because they believe they are going to have to sell their oil for less than it costs them to find and produce. They could quit worrying if they could only just quit drilling. Experience teaches us that it is exceedingly difficult to have unanimity of action among producers of oil.

"The country will need just as much if not more oil next year as it does this year, and if the operators shut their drilling wells down where they are they can come back to them next

Move Made Toward Cromwell Shut-Down

Rules proposed and tentatively adopted will have further consideration at meeting Saturday

Tulsa, Oklahoma, June 17.—Operators of the Cromwell pool will meet again Saturday to render their decision upon a proposal submitted at a meeting here today for the shut-down of operation of all drilling and producing wells. Under the plan proposed all operations in the field will cease at noon on June 25, after all operators shall have agreed to the plan, and continue in effect until July 24 and as long thereafter as may later be deemed necessary.

The plan under consideration, which is to be carried out under the direction of a committee of five, acting through field umpire, was drawn by a committee composed of J. M. Lovejoy of the Amerada Petroleum Corporation, R. Otis McClintick of the Gypsy Oil Company and E. H. Sabrin. The chairman of the meeting is authorizd to appoint the committee of five which in turn selects the umpire. However the operators at the meeting were unanimous in their selection of Fred Roush as the field umpire. Mr. Roush was formerly inspector of oil and gas in the Osage Nation.

There are approximately 75 wells drilling at various depths in the Cromwell field and approximately 20 new rigs and locations have been made for additional wells.

The total pipe line capacity is only 40,000 barrels per day. Approximately 25,000 barrels of oil is now being produced, and with 75 wells drilling to the Dutcher sand, it is obvious that the 15,000 barrels excess capacity will not be sufficient to handle the added production. It is estimated that unless curtailed the production will reach the 50,000 barrel mark within the next thirty days.

The rules covering the shut-down as proposed by the committee and adopted tentatively by the meeting with the disapproval of only one operator, and subject to further consideration Saturday are as follows:

1. Each operator in the Cromwell field shall notify the chairman of this meeting on or before Saturday, June 21, at 12 o'clock noon, if he shall consent to this plan of operations, and if all the operators in the Cromwell field shall consent, the chairman shall so notify all operators and this plan of operations shall become effective at 12 o'clock noon, Wednesday, June 25, 1924, unless further continued or terminated as herein provided.

2. Effective 12 o'clock noon, Wednesday, June 25, 1924, all producing oil wells and gas wells, shall be completely shut in except as herein provided.

3. Effective 12 o'clock noon Wednesday, June 25, 1924, all drilling operations in the Cromwell field shall cease at next casing point as specifically designated upon blue print attached hereto. No well shall be drilled into the Cromwell sand after 12 o'clock noon Saturday, June 21, 1924.

4. The chairman of this meeting shall appoint a committee of five operators, who shall have general charge and supervision of this plan of operations. This committee shall have authority to convene the operators in the Cromwell field in a general meeting.

5. The committee in charge of operations shall select and appoint a field umpire whose duty shall be to supervise and control all operations in the field in order to carry out the plan of operations herein outlined. All operators shall confer with the umpire with reference to all details of operations, and problems arising in the field, and the umpire's decision shall be final. Such umpire shall report to the committee in charge, and any operator feeling aggrieved by decision of the umpire may appeal to such committee for relief. Salary and expenses of such umpire shall be determined by the committee in charge, and shall be prorated and paid by the operators, according to the number of drilling and producing wells.

6. Prior to 12 o'clock noon, June 25, 1924, all operators shall arrange to procure fuel for subsequent operations which may be necessary, from sources other than gas wells producing from the Cromwell sand.

7. It is understood that, if any wells producing water at the time this plan becomes effective, the operator of such well, under the supervision of the umpire, shall have the right to pump off the water only.

8. The chairman of this meeting shall call a general meeting of all operators in the Cromwell pool for 10:00 a. m. Monday, July 21, 1924, to determine whether or not it is advisable to extend the period under this plan of operations.

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year without having to go to the trouble of finding new places to drill."

He hit the nail on the head.

Action along this line will put the oil industry in great shape in a few weeks time.

Under caption "What is the Matter With Oil Producers and Refiners" Wm. N. Davis, president of the Mid-Continent Oil and Gas Association, appealed to producers and refiners of the Mid-Continent oil district Monday to curtail operations. He said:

"In my letter of May 7th, I stated that apparently there was a wide difference of opinion just then as to the soundness or unsoundness of the economic condition of the oil industry but that, in my opinion, there was too much oil, too much production and too much drilling. Developments since that date have surely dispelled all difference of opinion. With everyone discussing the possibility of proration of runs and with certain restrictive measures already in effect by various purchasing companies, every producer and refiner must now realize that there is too much oil, too much gasoline, too much drilling and too much refining, and that this condition has existed since prior to May 7th.

"There is no virtue in the oft repeated observation that we do not have the large California pools confronting us this year that we had last year. The fact is that we have more production today than the country needs and, with the stocks much heavier than they were at this time last year, it is not to be expected that the purchasing companies will purchase any considerable amount of crude oil for storage. This condition has been brought about by the intensive drilling campaigns in the Mid-Continent field which furnished 1570 completions in May as against 612 in January. If this condition continues, we may expect either refusal of new connections with proration in flush areas, general proration or other forms of demoralization with consequent waste unless producers immediately curtail output.

"I am, therefore, in the name of conservation and sound business judgment, making this last appeal to the oil producers to not drill an unnecessary well but to shut down their operations and to do it at once. I am appealing to the refiners to restrict their runs until gasoline stocks have been materially reduced and, if there are those in the producing branch of the business who insist upon drilling unnecessary wells, I do not believe they should complain if notified by the purchasing companies that, there being no demand for the oil, the well cannot be connected to the pipe line.

"The situation is more in the hands of the Mid-Continent producer now than it has been for several years past. Last year California was flooding the market regardless of our action. In prior years Mexico was doing likewise; but now the Mid-Continent field is the chief offender and must take the responsibility if disaster overtakes the oil business this year."

Here is advice from a chief in the councils of the Mid-Continent producers.

His advice is common sense epitomized.

It begins to look as if the producers in the Mid-Continent have determined to save themselves. The action taken at the Tulsa meeting to hold down runs and to ease down drilling will do more to solve the problem than anything else we know of.

Let's hope that at the meeting Saturday the plan really crystalizes and the movement is really a movement with rapid fire action and good judgment.

Curtailment of production is all we need.

Common sense recommends it.

Business sense demands it.

Operators Called Upon to Curtail Drilling

Resolution adopted points out necessity for control of oil flood as price preserving means

By J. F. Carter, Jr.

Okmulgee, Okla., June 14.—A declaration that unless field work is immediately curtailed in the more prolific pools in Oklahoma crude oil production in that state will have attained new high levels approximating 534,000 barrels daily by August 15, was made by W. H. Gray of Tulsa, president of the Association of Independent Oil Producers, speaking at a special call meeting of members of the Okmulgee District Oil and Gas Association here today. Representatives were in attendance of most of the larger pipe line companies and crude buyers exclusive of the Prairie Oil and Gas Company.

Carrying out his prediction on the probable recovery of crude oil, Mr. Gray estimated that by August 15 the crude production from the state's more important pools might be expected to be about as follows: Stroud, 48,800 barrels from 48 wells; Cromwell, 56,000 barrels from 70 wells; Tonkawa deep sand), 30,000 barrels from 20 wells, and for the remainder of the state, 400,000 barrels. This, he explained, could reasonably be expected unless the several conferences and meetings now being held to consider cessation of all unnecessary operations in these pools were successful in halting field work.

What's to Become of Oil?

"The grave question that producers must consider is what is to become of this oil," Mr. Gray declared. "With some major pipe line companies already running oil into storage, how is this extra 75,000 barrels to be taken care of? I will tell you what must be done! It must be held back, there is no place to put it except in the creek and this would be criminal waste. This oil must be held back until needed. Unless the industry pulls itself together and takes care of the situation, it will bring disaster upon us all just as surely as it did last year."

According to Mr. Gray, the oil industry today is in better position theoretically than it was last year. However, from a practical standpoint, i. e., from the standpoint of the stability of the market structure, it is in but very little, if any, better position than it was at this time last year. He pointed out that the industry is confronted with a condition and not a theory.

"Oklahoma producers may as well face the facts," Mr. Gray asserted. "They are drilling too much and unless there are some steps taken to curtail this development facilities will not be adequate to take care of the oil brought to the top of the ground within sixty days from now and the industry will be headed towards general proration and all you producers know what general proration means—it means that every lease in the Oklahoma field will have to have its production cut down because there will not be facilities to take care of all the oil. As I have said before, the leaders of the industry are convinced that already there is too much oil on top of the ground."

Citing the situation in California, Mr. Gray cautioned the producers against consoling themselves with the theoretical position of the West Coast which still is sending crude oil around to the Atlantic seaboard refining territory.

Remedies

"What is the best remedy for the present stagnation of the oil industry and the on-coming over-production in the Mid-Continent fields," Mr. Gray asked:

"First: The most imperative remedy for our present situation is the curtailment of all drilling operations on wildcat and semi-wildcat leases. In order that you may fully understand the grave danger that lurks just ahead of you, I want to call your attention to the fact that at the close of April of this year there were 905 rigs up, and 2749 wells classified as drilling in the Mid-Continent territory (Kansas, Oklahoma, Texas, and Louisiana) and of that number 290 rigs and 1148 drilling wells were exploration operations, wildcats or semi-wildcats on territory on which no oil had been developed. A little figuring will show you that these tests represent 32 per cent of all rigs and 41 per cent of all the drilling wells of the five states. Every one of these wells should be shut down by producers where possible and no new operations begun; wildcatting should be brought as near as possible to a standstill. Producers should discontinue the practice of purchasing acreage in the neighborhood of wildcat wells when said acreage is sold for the purpose of promoting the drilling of a well.

"Second: The producers in those new areas, such as Tonkawa, Stroud, and Cromwell, should at once get together and curtail their operations and limit the production to the facilities at hand.

"Third: If proration has to be resorted to as a means of taking care of an over-production situation in the Mid-Continent field it should be made to fall upon those who are responsible for it and they should not be heard to complain, as they have plenty of time within the next thirty days to put their house in order and prevent an over-production. The owners of small wells throughout this great area are bitterly opposed to a cutting of the price below the average cost of production as a means of curbing a few large speculators and are equally opposed to a general plan of proration which would jeopardize the life of small wells. It is up to those who gather the oil throughout these fields to see to it that the burden of proration falls upon those who are the greatest offenders and those who are most able to bear

In concluding, Mr. Gray declared that if every producer in the Mid-Continent field will make a determined effort to slow down the operations in this territory there will be rejoicing among us by the first of October.

Many Represented

Following Mr. Gray's remarks, representatives of some of the larger companies operating in the Okmulgee district were introduced and in some instances short talks were made relative to the work the companies are doing towards stopping unnecessary drilling. Companies represented at the meeting included Phillips Petroleum, Sinclair Crude Oil Purchasing, Gypsy Oil, Atlantic Oil Producing, Cosden Oil and Gas, Pierce Petroleum, Allied Refining, Texas Company and others. W. B. Pine and M. C. French, prominent oil men of Okmulgee, also spoke. W. E. Wood of the Kingwood Oil Company of Okmulgee, acted as chairman of the meeting.

Just before the meeting closed a resolution was adopted which recites the imminent danger of increasing over-production and calls upon producers all over the state to stop all unnecessary drilling and specifically calls upon operators in the more prolific pools in Oklahoma to get together for deciding on a program of curtailment. The resolution states that if production should rise to a point where proration becomes necessary those areas in the state supplying this large production should bear the brunt of the proration burden. The resolution also states that it is the sense of the meeting that proration should be resorted to as a corrective measure rather than a cut in the market price.

Labor Commissioner Works Out Safety Regulations

Tulsa, Oklahoma, June 18.—At a recent meeting held jointly between representatives of the Mid-Continent Oil and Gas Association and the Labor Commissioner of Oklahoma, a proposed set of regulations relative to safety in oil fields was presented, and a committee appointed to study them and make recommendations.

Claude Connally, the Labor Commissioner had drawn up the set of regulations and was about to promulgate the regulations when requested by the Mid-Continent association to submit them for consideration by representatives of the oil industry. The commissioner agreed to this readily.

When the regulations were examined they were found to be extensive and it was decided to appoint a central committee of safety men, engineers, and experts to study the proposed regulations in detail, to confer with Mr. Connally in the matter of eliminating any requirements found unnecessary, and to generally revise the code. When the committee has finished its work final action will be taken upon the adoption of the regulations.

Magnolia's Purchases Increasing at Lowered Prices; No Competition for North Texas Crude

By H. H. King

Dallas, Texas, June 17.—Magnolia Petroleum Company is maintaining its reduced crude price schedule without sustaining a loss on outside runs even though no purchasing agencies other than independent refiners in the North Texas district have elected to follow its example and reduce the price accordingly, or inaugurate a general proration policy. Officials of Magnolia report an increase of between 10,000 to 12,000 barrels in their daily runs from Oklahoma and Texas in the past two weeks as result of new connections given producers that were unable to locate a market for their daily production. Magnolia did sustain a decline in daily runs during the past month, as its daily runs from Oklahoma, Kansas, Texas, Louisiana and Arkansas in April amounted to 71,145 barrels, while the daily average for May slumped to 70,369 barrels. This loss was almost entirely confined to Oklahoma fields, where several big producers broke connections when Magnolia's first cut was put into effect May 10. About 35,000 barrels of the daily runs represents crude produced by Magnolia in the five states.

The crude market in the North Texas and upper Mid-Continent district is entirely free of competition among the various purchasing agencies, and each buyer is reluctant to take on new connections, or increase runs, while in the meantime representatives of the major pipe line companies that have not found it necessary to alter prices are earnestly requesting the producers to shut all new wells down on top of the sand and await the return of a stronger market. Magnolia has lately supplied most of the connections given producers in distress within easy access to its lines, but is showing little interest in additional connections, since its storage facilities are nearly filled, and a big slump in water shipments to the East Coast and to export buyers was felt during May, as is shown below:

	April	May
Fuel oil (Gals.)	11,078,966	1,950,173
Refined oils (Gals.)	49,039,481	29,757,196
Crude (Bbls.)	398,361	248,005

It is not beyond sound reason to believe that the decline in water shipments experienced by Magnolia during May had something to do with its action in making two cuts in its crude price schedules within a period of four weeks. Fuel oil took the greatest slump, amounting to 9,128,793 gallons over the month, while gasoline, kerosene and other light refined oil movements from Magnolia's Beaumont refinery fell short exactly 19,282,285 gallons during May of equaling the totals reported for the month of April.

Crude oil runs made by the Magnolia Petroleum Company during April and May by fields follows:

	April totals in Bbls.	May totals in Bbls.
Healdton	229,578	225,125
Hewitt	208,867	200,317
Burbank	194,664	70,510
Cushing	163,906	245,528
Duncan	77,114	80,981
Wewoka	76,004	101,778
Yale	62,933	63,655
Bristow	41,245	46,632
Augusta	36,865	36,872
Cement	26,814	31,525
Walters-Beaver Creek	11,550	12,345
Totals for Okla. and Kan.	1,129,545	1,115,273
Luling	252,565	315,595
Electra and Burkburnett	231,740	248,051
Corsicana-Powell	184,654	177,993
Desdemona-Gorman	62,647	56,665
Mexia	65,574	66,282
Stephens County	47,217	38,776
Mirando	32,450	35,823
Ranger-Olden	24,319	20,931
Corsicana (Heavy)	9,414	10,201
Petrolia-Clay County	6,240	5,530
Thrall-Williamson County	2,116	2,090
Coleman County	716	831
Totals for Texas	919,656	978,773
Totals for Arkansas	49,963	54,774
Totals for Louisiana	35,190	32,630
Grand total five states	2,134,354	2,181,455

E. W. Hammond, the globe-trotting oil explorer, who calls Houston his home, departed for the Davis Mountains with his family last week to spend a summer's vacation.

Twelve 160 HORSEPOWER "WESTERN" DUPLEX GAS ENGINES

With "Western" Type "S" Idler Drive on 11-foot BELT centers at No. 2 plant of the Midway Gas Company, Signal Hill, California

Maximum Economy in~

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FLOOR SPACE
OPERATING COSTS
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6,240 Horse-power installed and in operation tells in a forceful manner what this company thinks of "Western" Gas Engines.

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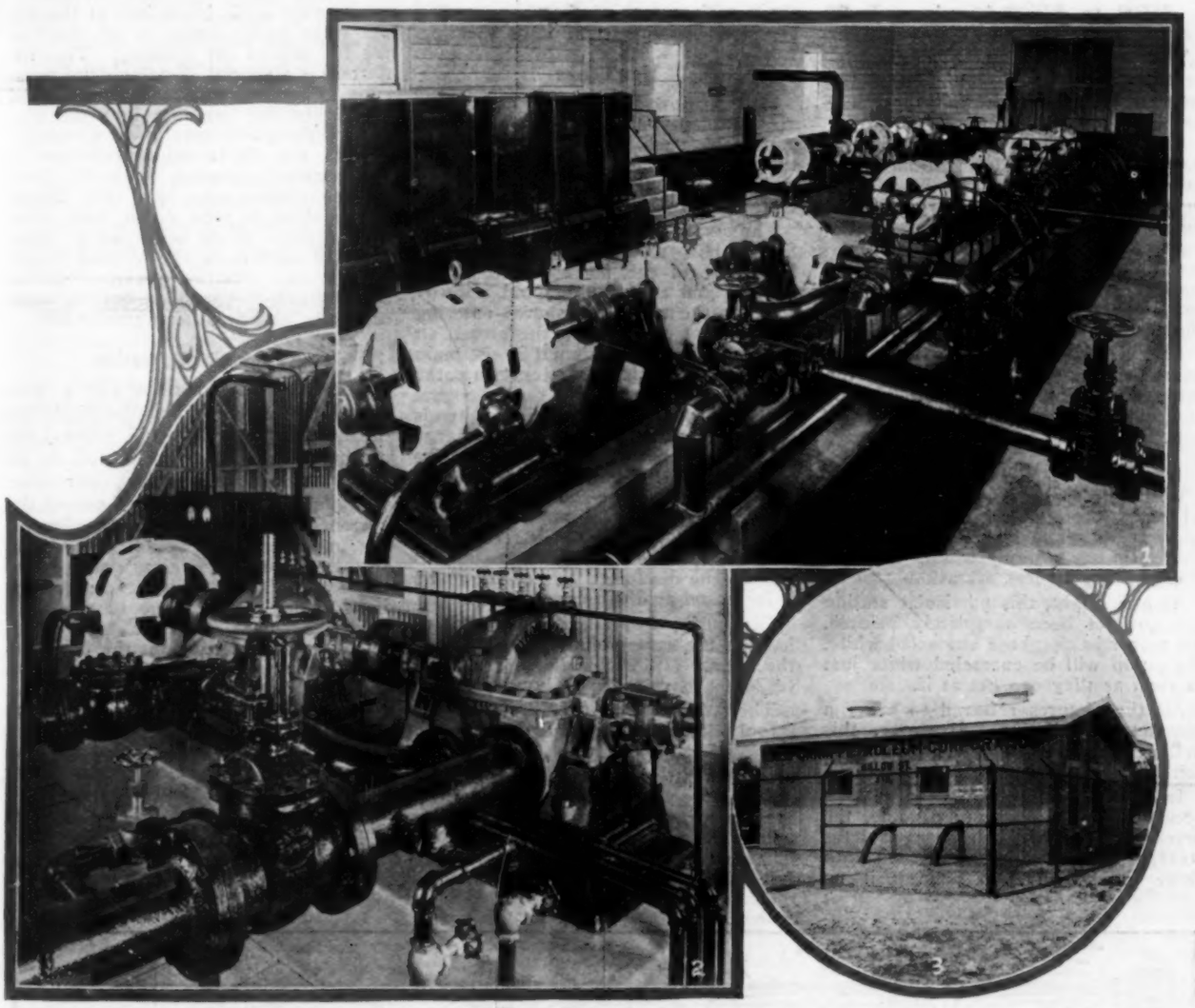


Views showing the installation of centrifugal pumps on the California Petroleum Corporation's new line in California

Centrifugal Pumps Handle Oil in California

Electrical drive brings operating costs to minimum and permits maximum of cleanliness

By W. E. Green

A VISIT over the pipe line system installed by the California Petroleum Corporation (Petroleum Midway Corporation), which handles crude oil from the Signal Hill (Long Beach) field to the marine docks at San Pedro, is one full of interest for a number of reasons. This system has adapted centrifugal pumps and the work of the pumps has been so satisfactory that many Eastern pipe line engineers have come to California to study the installations.

The oil is moved a total distance of eight miles, with a booster station located about midway between the Signal Hill station and the main station at Watson. The booster station is unique in that it operates automatically.

Another unique fature of the pump station is the size, and still another the cleanliness of the machinery, floor and buildings. The pumps and other machinery are white enameled until a lady could leave the ball room, walk about the stations, place her hands on the pumps, etc., and return to the ball room without soiling her fingers, her feet or her ball dress, even if it did brush against the pumps.

Electrical power is used throughout and the pumps are especially designed by the Byron Jackson Pump Manufacturing Company of Los Angeles and San Francisco for pipe line service. W. N. Beadle of the Los Angeles office is largely responsible for the success of the pump in pipe line work. He has spent many sleepless nights thinking about their use in a new field and many hard hours spent in trying to blaze a new trail are bearing a deserved reward.

The centrifugal oil pump has been described in some detail in a previous issue of The OIL WEEKLY, written by Mr. Beadle. This article has been reprinted and circulated generally by the Westinghouse Electric and Manufacturing Company.

One picture shows the Signal Hill pumping station, being station No. 1. The company has large storage tanks at this point near the pump house shown, and the oil runs by gravity from these several storage tanks to the suction of the Byron Jackson Centrifugal pumps, and is delivered into a 6-inch pipe line, extending from the house shown to Watson, a distance of a little over four miles. The discharge pressure of the Signal Hill pumps is about 300 pounds. This one pump with a 200-horsepower electric motor is delivering oil at between 1000 and 1200 barrels per hour, which is equal

to 24,000 to 28,000 barrels each 24 hours.

The point that will be of decided interest to the average oil engineer is the comparatively small size of the pump station, it being 18 feet by 28 feet.

Another picture shows the interior view of the Signal Hill station. It is interesting to note the long pipe bends on the suction and discharge of the pump, the discharge being nearest the front of the picture. Having long pipe bends as shown, the friction in moving the large volume of oil handled is materially decreased, which makes for higher over-all volume delivery.

The picture was taken with a considerable time exposure while the pump was running; and it will also be of decided interest to oil engineers to note the entire absence of vibration.

No Vibration

With this type of special centrifugal oil pump, the pumping motion is all a one-way rotation, doing away with the reciprocating motion, where there is always more or less vibration.

As a sidelight, this particular station has not yet been completely painted, the motor having been enameled white, the pump will be enameled white just as soon as they can get at it.

All the pictures referred to cover a complete installation. However, this Willow Street station, being located "on the line," is of special interest.

In practically every instance of a booster pump on a long oil line, the practice heretofore has been to have storage tanks delivering the oil into these tanks and then picking it up again with pumps of the reciprocating type and sending it on down the line.

No Tanks

This Willow Street station, because of the adaptability of the centrifugal pump for such line duty, eliminates entirely the necessity for storage tanks, very materially reducing the investment required.

The main oil delivery line from Signal Hill to Watson parallels the front line of the fence shown in the picture, and at a point about midway between the two pipes shown entering the building, but out in the street, an ordinary check valve is put in the main line. The suction line entering the house is cut into the line on the Signal Hill side of the check valve, extends to the pump and then the discharge line shown to the left, discharges the oil back into the main line on the discharge side of the main line check valve. The pressure entering the suction line at this point is reduced to somewhat between 10 and 25 pounds and on the discharge side of the pump is increased again to about 300 pounds.

Obviously, the Willow Street station handles the same volume of oil as does the Signal Hill station, that is, 24,000 to 28,000 barrels per 24 hours.

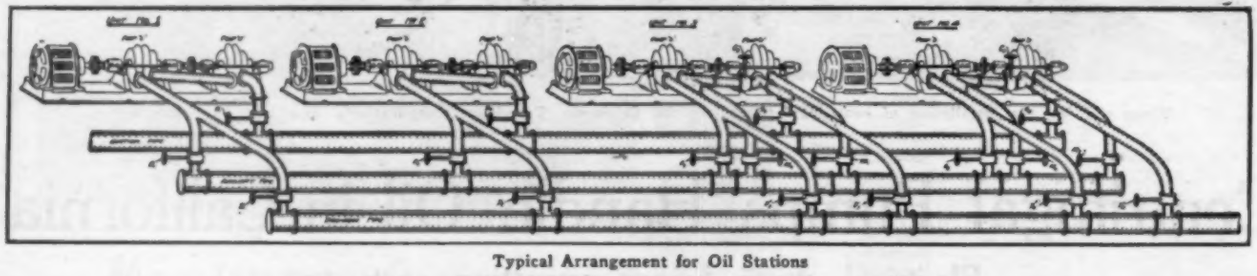
The Willow Street station building is only 18x26 feet in size.

Another picture shows the interior arrangement of the Willow Street station, the large pipe in the immediate foreground is the suction line where the oil enters the pumping unit. The small 3-inch pipe extending to the left of the suction line is conducted over to the little black box at the upper right hand corner of the door at the far end of the building. This little box is a special Westinghouse pressure governor, which is so designed that when the pressure into the suction of the pump gets up to about 150 pounds the 200-horsepower motor is automatically started, and the unit works continuously until the Signal Hill station is shut down, and when this is done, there being no pressure into the suction of the Willow Street station, the pressure governor causes a dial hand to engage a button, automatically shutting down the motor.

Automatic Operation

This particular station has a gate valve at the suction and the discharge of the pumping unit, and when both of these gate valves are closed, to all practical purposes, this particular pumping unit is entirely cut out of the system. The two small gate valves in the immediate foreground of the picture lead to an oil drainage sump. One of them is connected with an ordinary hand pump and the one to the right is extended to the drainage sump. With normal operation the large 6-inch suction gate valve is throttled a little, creating a vacuum, and the small line immediately takes up any oil that is in the drainage sump. The small check valve in the horizontal position prevents any chance of an operator making a mistake, and having oil delivered out through this small line under high pressure.

On the discharge side of the pump there is installed an ordinary high



Typical Arrangement for Oil Stations

VALVE OPERATING SCHEDULE—VALVES MARKED "X" ARE OPEN—ALL OTHERS ARE CLOSED

		UNIT No.	S_1	A_1	D_1	S_2	A_2	D_2	S_3	A_3	D_3''	S_4	A_4	D_4''	AS_1	AS_2	D_2''	C_3	AS_3	AS_4	D_4''	C_4
PUMPING WITH ONE UNIT		1	X		X																	
		2				X		X														
		3							X		X											
		4										X		X								
PUMPING WITH 2 UNITS IN PARALLEL		1 & 2	X		X	X		X														
		1 & 3	X		X				X		X							X				
		1 & 4	X		X							X		X								X
		2 & 3				X		X	X		X							X				
		2 & 4				X		X				X		X								X
		3 & 4							X		X	X		X				X				X
PUMPING WITH 2 UNITS IN PARALLEL WITH 2 HALF UNITS IN SERIES	1 & 2 Parallel	3 in Series	X	X		X	X				X				X	X	X					
	1 & 2 "	4 " "	X	X		X	X							X					X	X	X	
	1 & 3 "	4 " "	X	X					X	X				X				X	X	X	X	
	2 & 3 "	4 " "				X	X		X	X				X				X	X	X	X	
4 PUMPS 2- PUMPING UNITS IN PARALLEL WITH 2 PUMPING UNITS IN SERIES	1 & 2 "	3&4 in "	X	X		X	X				X			X	X			X	X			X

pressure check valve, and then a gate valve. In the far corner of the pump house are located the pressure governor as stated above, and also the automatic starting compensator with electrical instruments shown by the white dial, to indicate the condition of the electrical current.

Exactly this same kind of a pumping house and arrangement of one or more units for any pressures up to 1000 barrels can be installed on a line indefinitely.

Long Line Possibilities

For instance, with the delivery of oil under the same conditions as exist with the California Petroleum Corporation line, such automatic centrifugal units could be installed on the line extending from Los Angeles to Texas and then to New York. Refer to Scientific American article, page 256, October, 1923, issue, showing the wonderful system of pipe lines already installed, extending in a great semi-circle northward from Texas via the Great Lakes, eastward to New York City. The "missing gap" in this great network of pipe lines is from Los Angeles to Texas, which line incidentally would top the New Mexico field now showing up with much promise.

It is also believed that the United States war department would be interested in such a transcontinental oil line, insuring oil delivery from coast to coast in event of damage to the Panama Canal.

Practically all electrical companies favor of an electrical load of this character because it is generally 24-hour continuous service, and the very lowest electrical rates would be obtainable.

Still another picture shows the exterior view of the main Watson pump station, in which are installed four 200-horsepower B. J. centrifugal oil pumps. This building is only 31x65 feet in size.

It is of special interest to note the very neat appearance of the house and grounds, a lawn having been started with flowers on the hillside to the left.

Another view shows the interior arrangement of the main Watson station, and from a general interest standpoint the factor that impresses one probably most is the cleanliness of the entire installation.

White Enamel

This white enameled job is not a temporary proposition, but it is definitely planned to keep the house in the condition it is now—permanently.

B. F. Remington, the pipe line superintendent, advises that because of the way these centrifugal pumps are made, it is a very easy job to keep the pumping units clean.

Mr. Remington explained that only one man on each eight-hour shift is necessary, and he has virtually nothing to do.

Page 19 of Byron Jackson Bulletin No. 74 shows the piping arrangement essentially as the Petroleum Midway or the California Petroleum Corporation, Watson station is hooked up.

Normally only two units are operated, and 70,000 barrels per 24 hours are delivered through 4½ miles of 10-inch line down to the marine loading station.

By a little study of the arrangement the very remarkable flexibility of volumes and pressures will be appreciated.

For example, one 200-horsepower unit can be so separated that it is in effect the same as two separate 100-horsepower units at half the normal pressure of around 280 to 300 pounds. By separating two pumps of one unit 70,000 barrels per 24 hours can be delivered at 140 pounds discharge pressure.

Running unit No. 1 and unit No. 2 in parallel with 400-horsepower involved, as stated above, about 70,000 barrels per 24 hours are delivered against around 280 to 300 barrels pressure.

Flexibility

By hooking up unit No. 3 and unit No. 4 with 400 horsepower also involved, and running the two units in series at a pressure of 650 pounds residuum oil was delivered from the Watson station through 4½ miles of line directly into the fuel oil tanks of an oil tanker, which at the same time was taking on a cargo of crude oil. Regulation of the flow of oil down at the harbor end was safely effected by means of a gate valve, due to the characteristics of a centrifugal pump, which permits of closing a gate valve on the discharge side entirely, without causing line hammer or pressure which endanger the equipment in any manner.

By hooking up units 1 to 4, all inclusive, in series a total pressure of 1120 pounds can be obtained. In other words it will be evident that pressures from 140 pounds up to 1120 pounds can be obtained.

There are quite a number of other very interesting combinations that can be worked out with the ingenious piping arrangement shown which, as stated above, will be apparent to engineers after study of the piping arrangement.

Mr. Remington explained that because of the minimum of labor involved in operating these pumps, the low electrical rate enjoyed and the fact that the moment the electric motors are stopped, virtually all expense ceases, a rather exceptional record of efficiency has been realized, and a very low cost per 1000 barrels of oil moved.

Safety Board to Study Unions Accident History

Los Angeles, Calif., June 14.—The Union Oil Company of California has drafted a safety board, of which Ralph J. Reed, chief engineer, will be chairman. Associated with Mr. Reed will be Hugh A. Matier, representing exploration and production; E. P. Tallant, representing sales and transportation; H. J. Sharp, representing refineries; R. W. Garman, representing gas operations, and Gerald G. Blue, representing comptroller's office. Geo. W. Prussing is secretary of the board.

The board will make a study of the company's accident history, determine points of hazard and introduce remedial measures. It will co-operate with local committees and agencies now organized or to be organized for the promotion of safety throughout the company's activities. It will co-operate with other companies and organizations with reference to safety work and will keep all concerned informed as to safety requirements of various governmental authorities.

This endeavor, important from both the humanitarian and the economic standpoints, is primarily the basis for all safety undertakings. It aims to meet the incessant demand of modern industry for increasing efficiency in operation, for greater speed in production and for lower costs which follow successful achievements of these ends.

Of first importance is that all occupations be rendered of as little hazard as possible to the individual and to the group, that every effort be made to reduce to a minimum the inevitable losses which result from injury to the worker. Of quite secondary importance, though also a requirement of modern industrial life, is the elimination of all unnecessary hazard and damage to property.

Upon these broad foundations rests the industrial safety movement, in which the Union Oil Company is increasing its participation by the formation of the safety board. The various operating units of the Union Oil Company have for a long time been actively engaged in the various branches of safety work. A determined effort has been made to do away with all known hazards, both to life and to property, and a serious attempt has been made to educate employes in safety principles and in safe methods of performing their work. It is, therefore, rather with a view of unifying and co-ordinating work already done than of establishing a new function that the safety board has been formed.

The fundamental problem of accident prevention and of safety to life and property is largely the problem of the education of the individual in safe occupational practices.

Hazards may to some extent be eliminated by protective devices of one sort and another, and these should by no means be overlooked. It is well said, however, that "the best safety device is a careful man," and compliance with the specifications laid down by the safety board of the Union Oil Company will help men to think and act along these lines.

Oklahoma State Land Lease to Be Offered

Oklahoma City, Okla., June 16.—On July 8 the northeast and northwest quarters of section 16-1s-9w in Cotton County and the northeast quarter of section 36-22n-6e, Pawnee County, in Oklahoma, will be offered for oil and gas lease by the state commissioners of land office. On July 15 the northwest, southeast and southwest quarters of section 13 and the northeast, northwest and southwest quarters of section 16-25n-2w, Kay County, also will be offered for lease.

CRUDE OIL PRICE QUOTATIONS FOR ALL FIELDS

Changes

June 14—Effective this morning, the Joseph Seep Purchasing Agency announced a 50 cent reduction in the price of Pennsylvania Light oils, and a 25 cent reduction in the posted price of other grades of Eastern crude, except Ragland which had a 10 cent reduction.

June 16.—Effective this morning the Ohio Oil Company posted a 15 cent reduction in the price of Wooster crude

June 16.—Effective this morning, the Joseph Seep Purchasing Agency posted a 25 cent reduction in the price of Corning crude.

Current Postings

EASTERN STATES

	June 21 1924	June 21 1923
New York Transit	$3.75	$3.25
Bradford (Pa.)	3.75	3.25
Other Pa. Grades	3.25	3.00
Cabel	1.70	1.71
Ragland	1.00	.90
Corning	1.90	1.70
Somerset, medium	1.80	1.55
Somerset, light	2.00	1.75

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Daviess, Barren, Cumberland and Monroe Counties.

33 gravity or below	1.85	...
33 to 35.9	1.95	...
Above 35.9	2.50	...

CENTRAL STATES

Illinois	$2.07	$1.97
Indiana	2.08	1.85
North Lima	2.28	2.28
South Lima	2.28	2.28
Plymouth	1.45	1.35
Lodi	1.80	...
Princeton	2.07	1.97
Waterloo	1.55	1.45
Wooster	2.00	2.15

MID-CONTINENT
(Prairie Prices)

Below 30 grav.	$1.25	$ ...
30 to 32.9 grav.	1.45	...
33 to 35.9 grav.	1.75	...
36 to 38.9 grav.	2.00	...
39 gravity and above	2.25	...

(Magnolia Prices)

	June 21 1924	June 21 1923
Below 28 grav.	$ .99	$ ...
28 to 30.9 grav.	1.00	...
31 to 32.9 grav.	1.10	...
33 to 35.9 grav.	1.35	...
36 and above	1.50	...
Corsicana, light	$1.50	$ ...
Corsicana, heavy (at wells)	.90	...
Mexia	1.50	...

NORTH CENTRAL TEXAS

Corsicana, light	2.00	1.25
Corsicana, heavy	1.00	.70
Thrall	1.00	1.50
Mexia	2.00	1.60
Currie	2.25	1.90

SOUTH TEXAS

Mirando (Texpata)	.80	.75
Mirando (Magnolia)	.75	...

SOMERSET

Below 33 gravity	$1.15	$ ...
33 to 35.9 gravity	1.40	...
36 to 38.9 gravity	1.60	...
39 gravity and above	1.75	...

GULF COAST

Grade "A"	$2.00	$ ...
Grade "B" at Blue Ridge, Hull and Pierce Junction	$1.70	...

LULING

All gravities	.75	...

LOUISIANA-ARKANSAS
Caddo

38 gravity and above	$1.85	$ ...
38 to 37.9 gravity	1.75	...
32 to 34.9 gravity	1.65	...
Below 32 gravity	1.50	...

Homer

35 gravity and above	1.85	...
33 to 34.9 gravity	1.75	...
31 to 32.9 gravity	1.65	...
Below 31 gravity	1.50	...

COTTON VALLEY

	June 21 1924	June 21 1923
All grades	$1.00	...

Haynesville

33 gravity and above	1.75	...
Below 33 gravity	1.65	...

Bull Bayou

38 gravity and above	1.80	1.60
35 gravity to 37.9 gravity	1.65	1.50
32 to 34.9 gravity	1.50	1.45
De Soto crude	1.85	1.80
Crichton	1.65	1.45
Bellevue	1.75	.85
Jennings	2.00	1.40
Vinton	2.00	1.40
Edgerly crude	1.80	1.40

Smackover

	Texas Co.	Standard of La.	
26 gravity and above	$1.20	$1.20	...
25 to 25.9 gravity	1.05	1.05	...
24 to 24.9 gravity	.95	.95	...
Below 24.0 gravity	.85	.85	...

El Dorado

33 gravity and above	1.85	...
Below 33 gravity	1.75	...
East Field (Calion)	1.00	...

Stephens District
(Posted by Atlantic Oil Producing Company)

28 gravity and above 60 degrees	$1.40	...
26 to 27.9 gravity at 60 degrees	1.35	...
23 to 25.9 gravity at 60 degrees	1.20	...
Below 23 gravity at 60 degrees	1.00	...

WYOMING–MONTANA
Wyoming

Elk Basin	1.95	1.70
Grass Creek	1.95	1.70
Rock Creek	1.70	1.35
Lance Creek	1.90	1.70
Mule Creek	1.10	.95
Big Muddy	1.50	1.25
Salt Creek	1.60	1.35
Osage	1.90	1.80
Hamilton Dome	1.55	1.35
Pilot Butte	1.25	1.10
Landers	.70	1.00
Torchlight-Greybull	1.90	1.80

Montana

Sunburst	1.05	...
Cat Creek	1.95	1.85

CALIFORNIA
(Crude oil prices at well.)
Los Angeles and Orange Counties

14 to 19.9 gravity	$1.00	$ .60
20 to 20.9 gravity	1.01	.61
21 to 21.9 gravity	1.02	.65
22 to 22.9 gravity	1.03	.70
23 to 23.9 gravity	1.05	.75
24 to 24.9 gravity	1.07	.80
25 to 25.9 gravity	1.10	.85
26 to 26.9 gravity	1.13	.90
27 to 27.9 gravity	1.16	.95
28 to 28.9 gravity	1.19	1.00
29 to 29.9 gravity	1.22	1.05
30 to 30.9 gravity	1.25	1.11
31 to 31.9 gravity	1.28	1.17
32 to 32.9 gravity	1.31	1.24
33 to 33.9 gravity	1.34	1.31
34 to 34.9 gravity	1.37	1.38
35 gravity and above	1.40	1.45
Fuel Oil	1.40	...

CANADIAN CRUDE

*Petrolia	2.68	2.58
*Oil Springs	2.75	2.65

*Plus 2½ cents bounty.

MEXICAN CRUDE

Tuxpam (f.o.b. buyers tanker and tax	1.59	...
Panuco (f.o.b. buyers tanker and tax	1.21	...

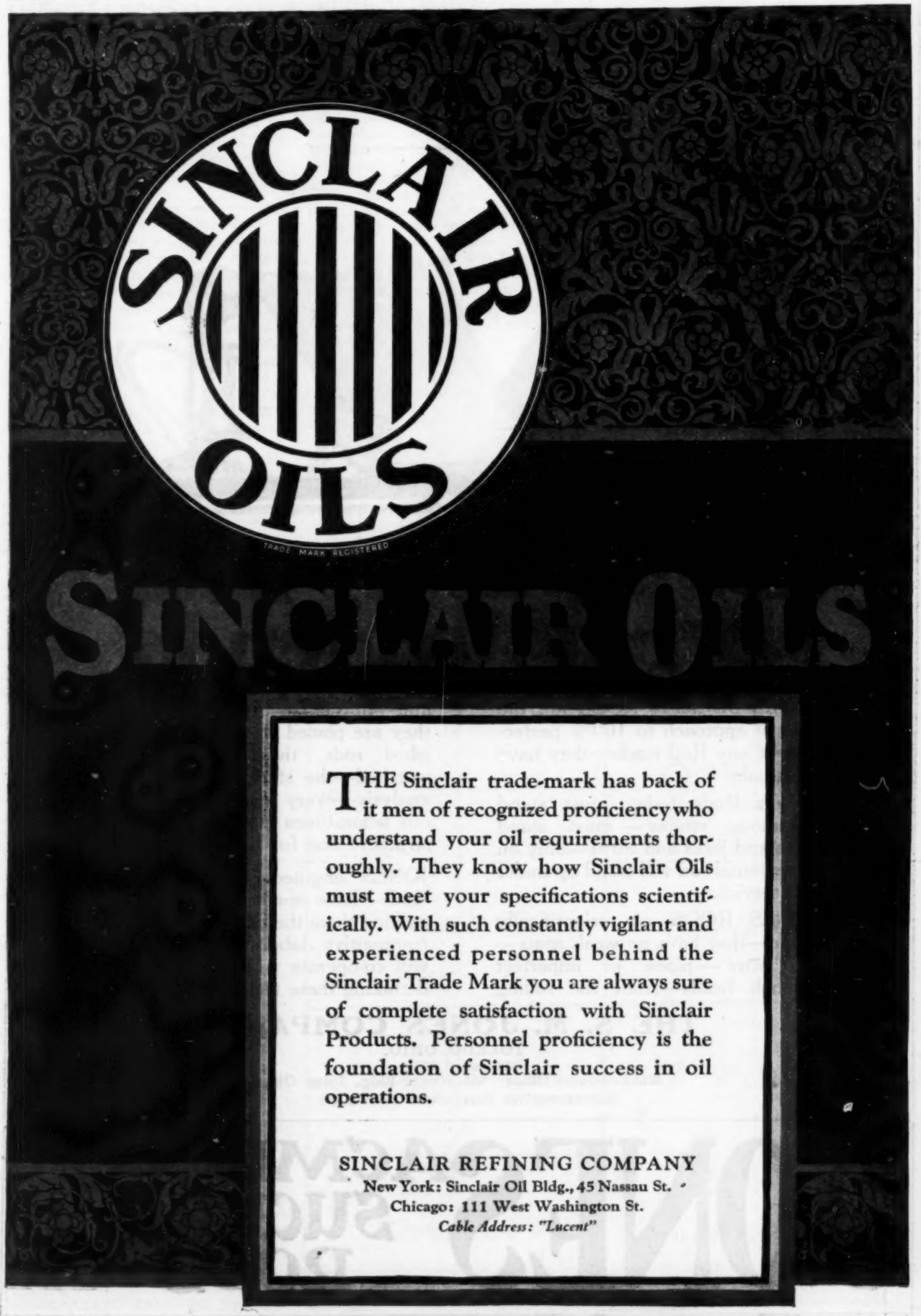
North Texas Crude Inventory Shows Largest Stocks Since Proration of Runs Last Year

Wichita Falls, Texas, June 16.—An inventory of crude stocks held in steel storage by producers, refiners and pipe line companies in the North and Central West Texas district as of June 1 shows a total of 15,778,000 barrels, as compared with 15,028,000 barrels on May 1. This represents a gain of 750,000 barrels within a period of one month, and is largely due to increased production in Southern Wichita and Archer counties, where crude has been going into storage for lack of a market for the past two months. Crude stocks began piling up in April throughout the district, and have shown a steady gain since, with the totals on June 1 reaching the highest level the district has experienced in more than a year. The nearest approach to this figure was on November 1, 1923, when stocks amounted to 15,465,000 barrels, but this was largely due to proration of purchases and runs.

The North Texas section accounted for the bulk of the crude stock increase during the past month, as 4,914,500 barrels were reported on hand on June 1, as compared to 4,190,600 barrels on May 1. The Burkburnett tank farms, which includes Texas oil held in storage by the Sinclair Pipe Line Company across the river in Oklahoma, added about 600,000 barrels during May, while the Electra section increased close to 100,000 barrels. The Central West Texas section, including tank farms in the Desdemona and Ranger district and some tankage in Stephens and Young counties, reported approximately 10,864,500 barrels of crude on hand June 1, or an increase of 27,100 barrels, as compared with the totals for the previous month.

The table below shows the total crude stocks in the North and Central West Texas district for the past four months:

	Barrels
June 1	15,778,000
May 1	15,028,000
April 1	14,483,000
March 1	14,496,000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Marland Lease in Osage County Most Prolific Quarter Section in the State of Oklahoma

By W. Lee Sloan

Tulsa, Okla., May 24.—The most prolific lease in the state of Oklahoma today is the Marland Oil Company's 160 acres in the southeast quarter of section 20, township 23, range 8, in Osage County.

With eight producing wells on the lease, the production figures show a total of 13,342 barrels of oil being run each day to the Ponca City refinery of the Marland company.

The Charles Petit lease of the Marland companies was purchased at the Osage sale of leases in June, 1919, for the sum of $85,000. One well on the lease has produced close to half a million barrels of oil.

The No. 2 Petit, discovery well of the tract, was located on July 9, 1923. On October 15, 1923, the Wilcox sand was topped at 2617 feet and the well was estimated to make 327 barrels per hour. On November 19 the well made 2678 barrels in 24 hours and on the Sunday following it flowed 3800 barrels. This well has made 485,000 barrels to date, all of the production coming through a one inch connection.

No. 3 Petit, located in the southwest corner of the tract, was the second well to be brought in. On December 15, 1923, the well came in making 127 barrels per hour and increased to 136 barrels per hour on the second 24 hour run.

On January 5 the top of the second break in the Mississippi lime was found in No. 6, center of the southwest of the northwest of the southeast. Drilling through to the top of the Wilcox sand at 2750 feet and drilled in five feet, the well made 90 barrels during the first hour. No. 6 is thought to be located on the northern edge of the structure and it soon settled down to small production, making at the present time about 125 barrels per day, a small amount compared to the other wells on the lease.

The second break in the Mississippi lime was found in No. 4 at 2770 feet. At 2809 feet the well encountered the big pay and after drilling to 2811, No. 4 made 70 barrels per hour. At 2836 feet the oil came down to 25 barrels per hour and at 2853 feet the output was increased to 32 barrels per hour. The time of starting this well is given as December 22, 1923. This well, like No. 6, is on the edge of the structure and it is not as large as those on top of it.

No. 7, located in the northwest corner of the southeast of the quarter, came in on March 19. Topping the Wilcox sand at 2637 feet and drilling through to 2651, the initial production of the well was gauged at 126 barrels per hour. This well is an offset to No. 2, discovery well of the field.

On May 2, No. 11 hit the Wilcox sand and came in for 135 barrels per hour from 2619 feet. The well has only been drilled in one foot and the production is holding up at that level.

Fifteen hundred feet of oil was reported in the hole on well No. 10 on the morning of May 7. The sand had been found at 2635 feet. After drilling to a total depth of 2642 feet, the well came in making 2866 barrels per day by actual gauge.

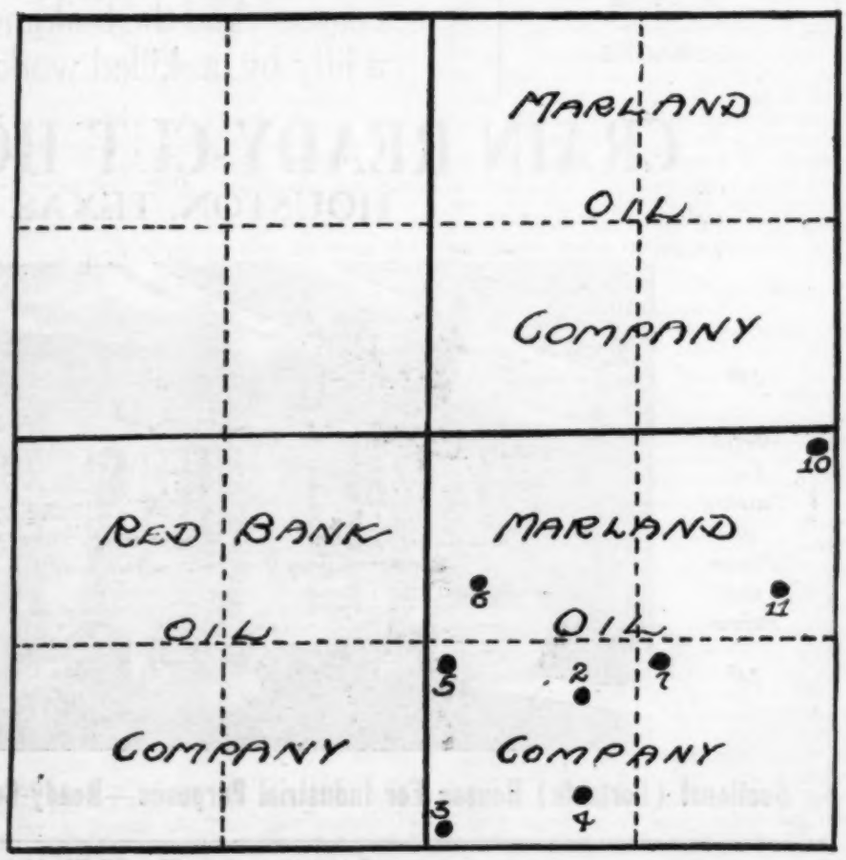
The last of the series of eight producers is the No. 5 well which came in on May 16 for 160 barrels per hour. The sand in this well was found at 2735 feet and drilled into five feet.

There are now three wells drilling on this 160 acre tract and locations have or will be made immediately for five more wells. This will make a total of 16 wells on the tract, the prescribed number.

A rather peculiar thing can be noticed by referring to the sand records of the different wells. Nos. 3, 4, 5 and 6 wells are producing from the bottom of the Wilcox sand, while Nos. 2, 7, 11 and 10 are producing from the top of the Wilcox sand. Another peculiar well on the lease is the No. 9 in the northwest corner of the northeast, which is producing about 200 barrels of oil from the Bartlesville sand. This is the only Bartlesville sand well on the lease.

An eight inch line of the Marland company is running the oil to the refinery at Ponca City. Two large electric pumps furnish the power for pumping the oil.

If the No. 2 well has produced 485,000 barrels of oil since it came in the Marland companies have been enriched in an amount of $970,000 from this one well. With eight producing wells on the lease, the mammoth profit made from this lease is hardly imaginable. When the eight wells have equalled the record of No. 2, the Marland Oil Company will have taken a little better than $7,000,000 from the Petit 160 acres.



Luling Pipe Line Due Completion by July 15

Luling, Texas, June 18.—Good progress is being made by the Magnolia Petroleum Company in constructing its 8-inch welded pipe line from the Luling field to Hull, Texas, where the line will tie into Magnolia's Mid-Continent-to-Coast trunk line system, and the line is almost certain to be ready for operation by July 15. More than 100 miles of the pipe line has been welded, with about 80 miles yet to be completed, and gangs are now working near the town of Sealy.

Magnolias crude oil runs in the Luling district, including its own production, amounted to 315,595 barrels during the month of May, or a daily average of 10,180 barrels, as compared with only 252,565 barrels during April, or a daily average of 8418 barrels. A large portion of this production is being stored in the field, pending the completion of the pipe line outlet, while the balance is consumed in the company's skimming plant near Luling.

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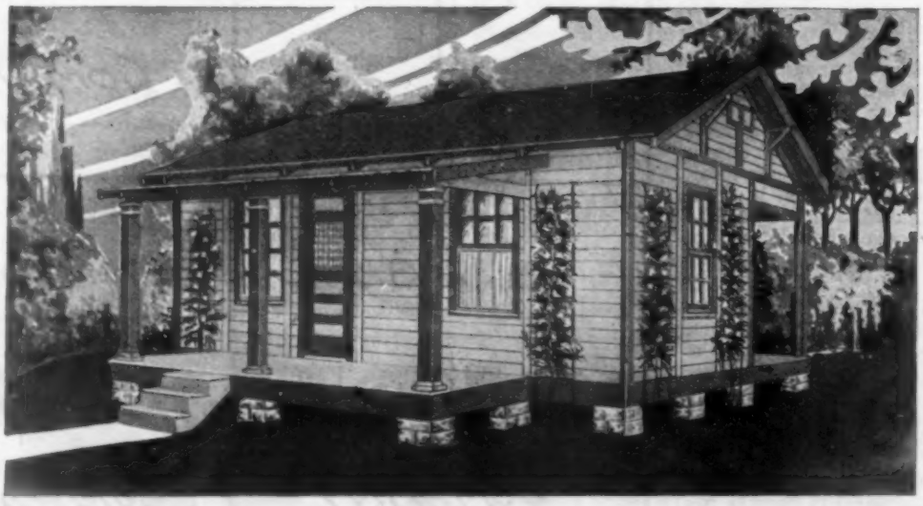

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Sectional (Portable) Houses For Industrial Purposes—Ready-Cut Houses For Permanent Homes

Many Methods Used to Flow Oil Wells

How crude is produced in various sections told by operators and engineers in review

By John M. Lovejoy
*General Manager Amerada Petroleum Corp.**

MUCH work is being done by producers in all sections of the country in trying to find the most efficient way of flowing wells and the method which will make wells flow for the longest period. Most of us know what is going on in the Mid-Continent field, but we are not so familiar with operations in other localities. In California more progress has been made than in any other place. Here, more than elsewhere, the old adage "Necessity is the mother of invention" applies. With the extreme depth of the producing horizon and the high pressures found it was imperative that changes and improvements of methods and equipment be worked out in order that the wells might be kept flowing as long as possible.

This paper is a compilation of notes and letters on the subject of flowing wells. Mr. Paul Paine has contributed a letter on California, E. L. Estabrook on Salt Creek, Mr. C. C. Brown supplying the records and information on the Marland Osage well. To each of these men the author wishes to acknowledge his thanks and appreciation.

What Is Being Done

No attempt will be made to describe the equipment used for the various methods. The chief object of this paper is to put before the producer what is being done in fields other than those with which he is intimately acquainted.

In discussing this broad subject we must at all times be fair and open-minded. Unfortunately, the subject does not boil down to a methematical comparison of figures. Experimentation along most lines leads to definite conclusions so that a certain method or methods can definitely be established to be better than or inferior to other methods. It is impossible to compare methods of flowing wells this way. Ultimate conclusions must be drawn, mostly from a practical and common sense viewpoint, rather than from a comparison of technical data. The chief reason for this is that no two wells are exastly alike. Sand conditions differ in every well. Rock pressure in the sand varies in different fields and also in different wells in the same field. Saturation of the sand, hydrostatic pressure, volume of gas and location of the well on the structure are factors which vary in every well and which must be considered when comparing various methods of extracting the oil.

Many Problems

Should any one attempt to say that any certain method is better for all wells than any other method, he would immediately establish his own ignorance of the subject. He might show figures to prove his theories, but such figures would very likely not even hold good for the wells on the adjoining leasehold. Each field and each well is its own problem. In most cases where very satisfactory tests have been made of a certain method of flowing it is more than probable that this particular well was an exceptionally good well to start with and would have shown equally good results with other methods had they been tried. We do believe, however, that in a general way certain control of flowing wells is very beneficial and will result in a greater yield for the well and lower operating costs.

Flowing Wells

Methods of flowing wells may be classified as follows:

1. Open flow through casing.
2. Flowing through tubing.
3. Flowing against straight back pressure.
4. Stop-cocking.
5. Flowing through bean or flow plug.

Open Flow Through Casing

This is the usual method of flowing wells in the Mid-Continent field. The wells are drilled into the sand dry and allowed to make what they will; the bigger the better. The casing control-head and oil saver keeps the well under control and prevents any waste of oil. The well is usually left alone for a time and then periodically agitated until the flow has become so infrequent that the well must be tubed and pumped, or made to flow through the tubing with packer.

Flowing With Tubing and Packer

Except in the case of small wells the use of tubing for flowing usually follows open flow through the casing. In this method the oil and gas go into the bottom of the hole at the same rate and with the same energy that they had while the well was flowing open and with tubing instead of having the large casing to conduct them to the surface, we have a smaller conductor. Consequently the energies confined to this smaller conductor will cause the well to flow for a considerable period after the well has entirely stopped flowing through the casing. Many cases of small wells making 40 to 100 barrels will not flow through the casing when drilled in, but as soon as tubing and packer are run such wells will make their production for months in this way. In most of the Mid-Continent fields the tubing and packer method can be used and is used for a period of from one month to four or five months after the period of open flow and prior to the pumping stage.

It is interesting to note in this connection that in the Tonkawa field the tubing and packer method was not at all successful. The wells came in for from 500 to 3000 or 4000 barrels with a large gas volume, but a low rock pressure. As soon as the wells stopped making their production by open flow an attempt was made to flow them through tubing and packer, but it was found that there was not enough pressure left in the sand to cause the wells to flow through the tubing. The fluid level in these wells, as soon as they stopped flowing, was about 200 feet from the bottom. It appears that the large gas volume and the very high gravity of the crude allowed the wells to make high initial production until the gas volume was exhausted and then the wells had to be pumped, in order to get their production.

Various types of packers are used. Anything that will confine the oil and gas to the tubing instead of allowing them to come up in the casing is satisfactory. It might be well to mention that there are several flowing and pumping devices which will allow a well to flow freely through the tubing while the well is actually being pumped. We have had a very good success with the Ricketts flow barrel, which accomplishes this by allowing the fluid to enter the tubing at any point desired above the working barrel. This is, of course, after the packer has been removed and is only for use in wells where there is enough pressure to maintain a fairly good fluid level in the well. With this attachment, while the well is pumping, it will make quite frequent flows.

Flowing Against Straight Back Pressure

At the October, 1923, meeting of the A. I. M. M. E. the writer presented a paper on "Effect of Back Pressures on Wells in the Brock Field." The conclusions reached after an extended series of tests showed us that straight back pressures in this field did not lower the ratio of gas to the barrel of oil, as had been expected. During the period when these tests were being made it was necessary, due to the general oil situation, to prorate runs. In this field we reduced the production approximately 1000 barrels per day to 350 barrels per day by building up the back pressure against which the wells were flowed. When the entire production could again be taken from the leases the back pressure was removed with the result that the wells came back to a production slightly in excess of what they had been making prior to proration. However, this only lasted for a short time, when all the wells of the field showed about 10 per

*Delivered before meeting of Mid-Continent Section A. I. M. M. E., Tulsa, May 5, 1924.

cent decline as compared with the period before proration. Since that time the wells have been producing against a small back pressure varying from 5 to 25 pounds. Although we were unable to show by our back-pressure tests that we were actually instituting a saving of gas, we have found that the wells in this field are establishing very satisfactory flowing records. A list of the flowing wells in the field, showing initial production, production on May 1, 1924, and the age of the well, follows:

Farm Name	Well No.	Bbls. Init. Prod.	Bbls. Prod. May 1, 1924	Age of well Mos.	Days
S. Baptiste	1	80	35	24	17
	6	235	40	22	6
	10	90	12	19	6
	12	60	15	16	25
	13	70	25	15	7
	16	134	20	11	17
	19	26	19	10	5
M. Farve	1	177	30	22	3
	2	80	24	20	6
	3	70	25	18	14
	6	318	140	14	29
	7	100	20	13	9
	10	119	20	2	15
	11	66	50	1	
	12	75	70	1	
Marris	1	205	31	23	11
J. Baptiste	2	15	7	9	7

From the above list of flowing wells the M. Farve No. 6 is worthy of special mention. This well was completed February 3, 1923, with an initial production of 318 barrels, was allowed to flow through the casing until April 30th, at which time tubing and packer were run. This well, at that time, had declined to 150 barrels. As soon as tubing and packer were run in the well the production increased so that the average production for the month of May, 1923, was 170 barrels. During July and August, when proration became necessary, the production was cut to 120 barrels a day. It was producing against a back-pressure varying from 100 pounds to 170 pounds. During October it was necessary to further prorate and, with a back pressure of 200 pounds, this well produced 65 barrels per day. The middle of November the back pressure was released to 25 pounds and the production came back to 150 barrels average. Still producing against 25 pounds, the production worked up to 170 barrels average for the months of January and February, 1924. The well averaged 165 barrels for the month of March and 155 barrels for the month of April, 1924. This well has been flowing through tubing and packer and for exactly one year and is making as much oil now as when the tubing and packer were first run in the well. At all times the well has been producing against a back pressure.

The oldest well of the series is No. 1 S. Baptiste, which has now been flowing through tubing and packer and most of the time against a small back pressure, for two years and 17 days. The sands in the Brock field are from 1300 to 2000 feet deep. The gas volume per barrel of oil is not high; about 1000 cubic feet per barrel. The rock pressure about a year ago was approximately 300 pounds. No water has shown up in any of the above list of wells.

We will not attempt to make any definite statement as to the value of the back pressures on these wells, but it is thought possible that a small back pressure has greatly lengthened their flowing life.

Stop-Cocking

Mr. E. L. Estabrook, production engineer for the Mid-West Refining Company, writes:

"Our tests in the Salt Creek field indicate that flow nipples serve no particularly useful purpose in the work of reducing the amount of gas produced with each barrel of oil. There is no floating sand in the Salt Creek oil which would tend to wear out the fittings, and any reduction of flow can be accomplished just as easily and just as safely by partially closing the valves as by a change of flow nipples.

"We consider that the most effective method of gas conservation is to tube all flowing wells as soon as they pass the flush production stage. This is done in order that the gas which escapes from the top of the oil sand may not be free to pass out of the hole without doing any useful work. When the well is tubed to a point near the bottom of the sand the gas must move downward through the oil, mingle with it and then carry it up the tubing to the surface. When the oil production of the well is too small to keep the bottom of the tubing covered and thus maintain a steady flow, any waste of gas may be prevented by stop-cocking.

"Stop-cocking, or alternately closing in and opening up a well, permits sufficient oil to accumulate during the shut-in period to cover the bottom of the tubing and maintain a steady flow during a short period when it is open. The well should be opened for flow as often as possible in order to prevent the gas pressure from building up so high that the flow of oil into the well would be reduced. A stop-cocking valve, which opens every time the rock pressure reaches a certain point and closes again as soon as the pressure has been released and the flow of oil ceases, appears to be an admirable device to insure regularity and efficiency in stop-cocking."

Increases Flow at Brock

A series of stop-cocking tests made in the Brock field showed an increase of production from 27½ barrels to 31 barrels and a decrease in the gas volume per barrel of oil from 1006 cubic feet to 834 cubic feet. The above tests were made in September, 1923. Since that time, until April, the well has produced consistently 30 barrels a day, with a stop-cocking valve, releasing first at 45 pounds and later at 30 pounds. In February the valve was disconnected in order to get comparative figures on straight flow through tubing. The well immediately went dead and had to be swabbed to get back to prodluction. The stop-cocking valve was again put on and the well made its regular production for 60 days longer, until April 15th, when the well finally stopped flowing. It has now been put to pumping and shows a production of 20 barrels a day.

Considerable work has been done perfecting the automatic stop-cocking valve. Westcott & Greis, of Tulsa, are puting in a stock of these valves so that it will be possible to obtain them covering any range of release and closing pressure desired.

Through Bean or Flow-Plug

Mr. H. C. George, of the United States Bureau of Mines, at Ardmore, writes:

"At the Kaufman well in section 31-2s-2w, which, up to March 27th, had been flowing for months at the rate of about 20 barrels a day, I induced Mr. Kaufman to place a ¼-inch flow nipple in his lead line. The lead line, as well as the tubing, was 2-inch. The tubing was packed in the 8¼-inch near the bottom. The 8¼ inch was cemented at 2590 feet and the total depth was 2660 feet. No liner was used. The first 24 hours after the flow nipple was introduced the well made 135 barrels; the next 24 it made 100 barreds. During the last month it has averaged about 75 barrels a day as compared with 20 barrels a day during the previous month."

Mr. Paul Paine, of California, writes:

"In the first place, you are no doubt aware that in California the wells are

Carolina-Texas Gas Field Area Further Indicated

Laredo, Texas, June 16.—With completion of the Associated Oil Company's first wildcat test in the Carolina-Texas field as a gasser for more than 25,000,000 cubic feet, another big gasser is added to this field, making the proven gas bearing acreage more than two miles square. It is not entirely proven yet because most of the wells have drilled in well nigh a line northeast and southeast from the first Carolina-Texas gas well on the Barnsley ranch. The Associated well is flowing gas into the Border Gas Company's gathering line and it will be used for fuel in Laredo.

The well was completed Tuesday, when it blew itself clean making some fresh water, which, however, has entirely ceased at this writing. Casing is set on top of a packer at 2108 feet. The bottom is 2206 feet.

Gas production in this field seems unlimited and there are gas sands all the way from 1900 feet to 3000 feet. Most operators believe nearby is a big oil pool. The Associated was after oil and not gas and was bailing in a promising sand when the gas cleaned the hole.

Four new wells were added to the Laredo district during the week: The Shasta Oil Company's No. 6 Block 50, Los Ojuelos grant, 125 barrels; Carnahan Producing and Refining Company's No. 59 Block 10, Los Ojuelos grant, 100 barrels; Quigg-Olsan No. 3 Block 49, Los Ojuelos grant, 100 barrels, and Associated Oil Company's No. 10 survey 607 for 75 barrels.

Interest attaches to a wildcat known as Henne, Winch and Fariss, block 4, survey 256, Jim Hogg County, which drilled through a hard rock four feet thick at 1941 feet and went into an oil sand. Heavy gas also was encountered. This sand has been cored 16 feet. Casing is being set at 1943 feet for a test.

not brought in 'barefoot' as in Oklahoma; the loose, cavey measures do not permit it, but require in every instance that a finishing string of casing be inserted through the producing measure down to the bottom of the hole. The oil then gains access to the inside of the pipe through screen openings. Nearly all wells are drilled with a rotary, and after the required depth has been reached the finishing string is let down and the well is in shape to be brought in.

Years ago this procedure comprised bailing out the mud fluid and letting the flow start with a bang, sometimes blowing the bailer up through the crown block, frequently doing considerable damage and at best, with a flowing well, never being sure whether the well would flow ten minutes or ten years, because of the great sand trouble. This was in the days of perforated pipe, before the use of screen. The latter was a valuable contribution, but even with it there was much trouble from the sand gathering inside the pipe sufficiently to bridge the hole and stop the flow. Some bright mind then conceived the flow-plug or "bean." This is simply a restricted opening in a steel billet placed in the flow line, the opening having a diameter of from 1¼ inches to 1 inch. It introduces a friction factor that retards the rate of flow, reduces the velocity of the fluid in the casing and into the casing and therefore reduces the capacity of the fluid to carry the sand along with it. Recently some experiments have been tried with the bean at the bottom of a string of tubing, instead of in the flow line, but I am unable to find any really beneficial results of consequence. Placing the bean in this position has the objection that the tubing must be pulled whenever it is desired to change the size of the opening or whenever the bean has been cut out by sand.

Reduces Costs

"The use of the bean at the surface, in the flow line, has been of tremendous benefit. It has practically eliminated the sanding or bridging of flowing wells, reduced operating costs and has undoubtedly effected a much more beneficial utilization of the gas, so that more of the oil is produced during the flowing life of the well than would be the case without its use.

"The present California practice, even in those prolific areas where large wells are assured, is to insert a string of tubing prior to bringing in the wells. No packers are used, except various devices which serve to pack off the space between the tubing and the casing at the top of the hole. At the bottom of the tubing is attached a swedge nipple, just large enough to go down comfortably inside the casing; this serves to guide the fluid up into the tubing. When the tubing has been inserted and fastened at the top of the casing the mud fluid is next displaced by pumping down inside the tubing, plain water; the mud escaping through an opening and valve in the side of the casing at the surface. When the mud has been entirely eliminated and only water is in the well a swab is run in the tubing and the water swabbed out until the well starts flowing. Sometimes, instead of the foregoing procedure, some of the mud is bailed from the hole with a big-hole bailer before the tubing is run in, and the remainder swabbed out through the tubing, but this is a rather dangerous performance with some of the high pressure wells which have a way of breaking in earlier than looked for.

"Gas traps are invariably used, for separating the gas and sending it along to the absorption plant. These traps are built for pressure service, because the gas pressures frequently hold up for months, so that the gas may be separated at from 35 to 50 pounds, thus dispensing with the need for compressors. You may be interested in knowing that at Signal Hill, where the first well was completed in June, 1921, the present gas production is in excess of 200,000,000 cubic feet per day and less than half of it requires compression before going through the plants."

Method Success in Osage

Mr. C. C. Brown, general manager of production for the Marland companies, has provided some most interesting data on this method of flowing.

(Continued on page 30)

THE NEWLY AFFILIATED PURCHASING AGENTS ASSOCIATION OF TAMPICO, MEXICO

Seated left to right: Robt. H. Abbott, A. P. A., Huasteca Petroleum Co.; T. H. Lockhart, Treas., P. A., Huasteca Petroleum Co.; P. J. Oliver, President, P. A., Mexican Gulf Oil Co.; O. V. Borden, Secretary Tulsa Association; T. A. Swenson, Vice-President, P. A., New England Fuel Oil Corp.; W. E. Leckie, P. A., Cias. El Agwi; A. P. Giesendorff, P. A., Transcontinental Petroleum Co. Standing left to right: H. B. Swetland, A. P., East Coast Oil Co.; N. S. Niven, P. A., The Texas Company of Mexico; B. B. O'Brien, P. A., Tampico Navation Co.; R. J. Tansey, P. A., Pierce Oil Corp.; J. Lodewijk, P. A., Corona Oil Company; A. E. Hagberg, P. A., El Aguila Co.; P. B. Holsinger, P. A., International Petroleum Co.; A. W. Phillips, A. P. A., Transcontinental Petroleum Co.

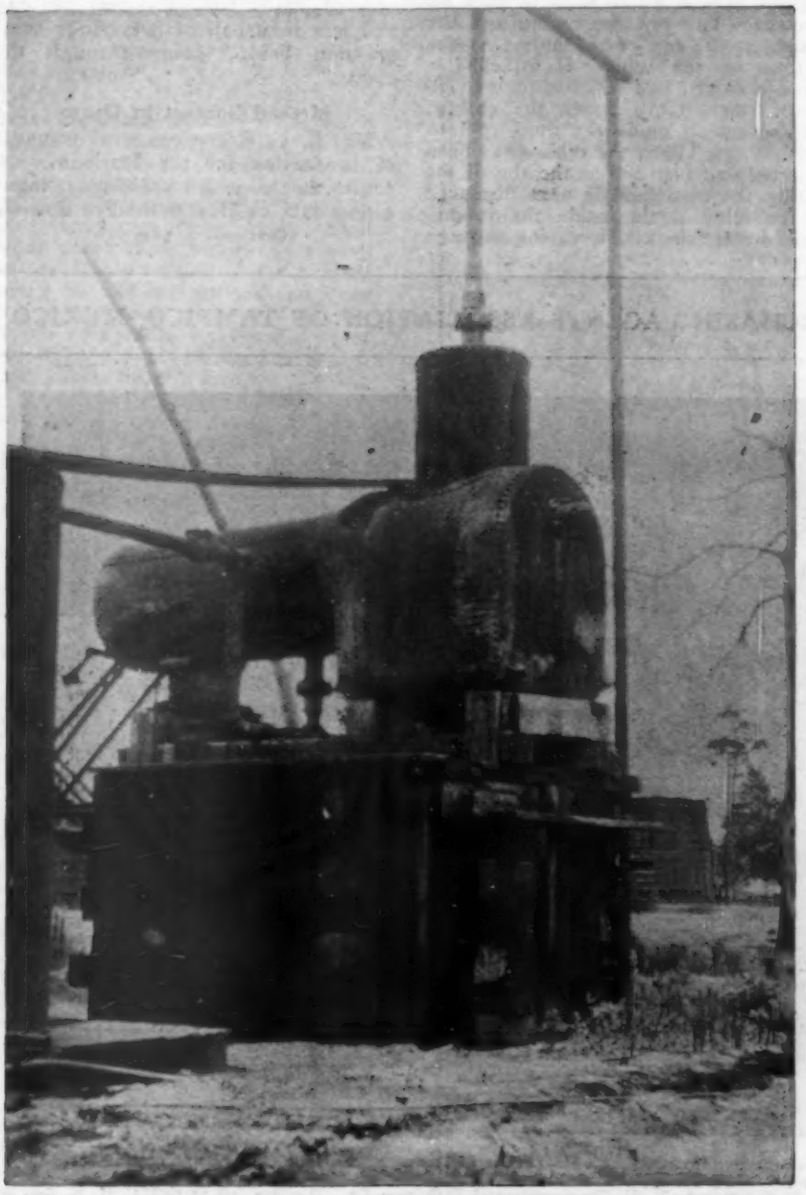
Worn Out Boiler Utilized as Gas Trap Proves Economically Effective in Texas Gulf Coast

HOW an old field boiler can be utilized as a gas trap is shown in the accompanying illustration. The picture was taken in a Coastal field, near Houston.

The idea of utilizing the boiler as a gas trap originated with an engineer working for one of the big companies with headquarters in Houston. The trap was improvised and has been giving satisfactory service for several years. Operators who are troubled with gas might find the idea practical, especially since nearly every field has old boilers that could be turned into use as traps.

Oil and gas enter the boiler through the small pipes at the small end of the boiler. All openings in the boiler were tightly sealed at the time the trap was put into use. The intake pipes enter the boiler at a slightly higher level than the outlet pipe. The comparatively large surface over which the oil spreads after it enters the boiler allows the gas and oil to separate quite completely. The gas rises to the top of the boiler and escapes through the high pressure fittings at the top and connected to a gas line. The oil leaves the boiler through a big flow pipe connected to the bottom, near the center. This pipe connects with a battery of storage tanks near the trap.

Considerable economy has resulted from this arrangement. The improvised trap does the work of a manufactured one, and the cost of the "home-made" trap was practically negligible.



Improvised gas trap showing oil intake lines at left end, oil outlet pipe in center, and gas line at top.

Many Methods Used to Flow Oil Wells

(Continued from page 29)

The Marland No. 1 Pettit, southeast corner of section 20-23-8, Osage County, was completed in October, 1923. Due to pipe line congestion, the well was not allowed to produce until November 15th, at which time the well was flowed through a 1-inch flow-plug. It was necessary, in November and December, to curtail the production to 2600 barrels a day, which was done by shutting in the well completely part of the ime. After January 1st the well was allowed to make its full production through the flow-plug. It made 2990 barrels on January 1st, 2961 barrels on February 1st and 2970 barrels on March 1st, with practically no daily variation. During March and April the production began to show a slow but steady decline to a production of 2640 barrels, which was the actual gauge on the well on April 22.

Pressure readings were taken just before the oil passed through the orifice and temperature readings on the low pressure side. During the life of the well the pressure has declined from 145 pounds to 116 pounds, and the temperature has increased from 104° F. to 109° F. Mr. Brown says the well has a very small gas volume. This well has produced up to April 22 a total of 453,145 barrels of oil. It has made no water, B. S. or cut oil.

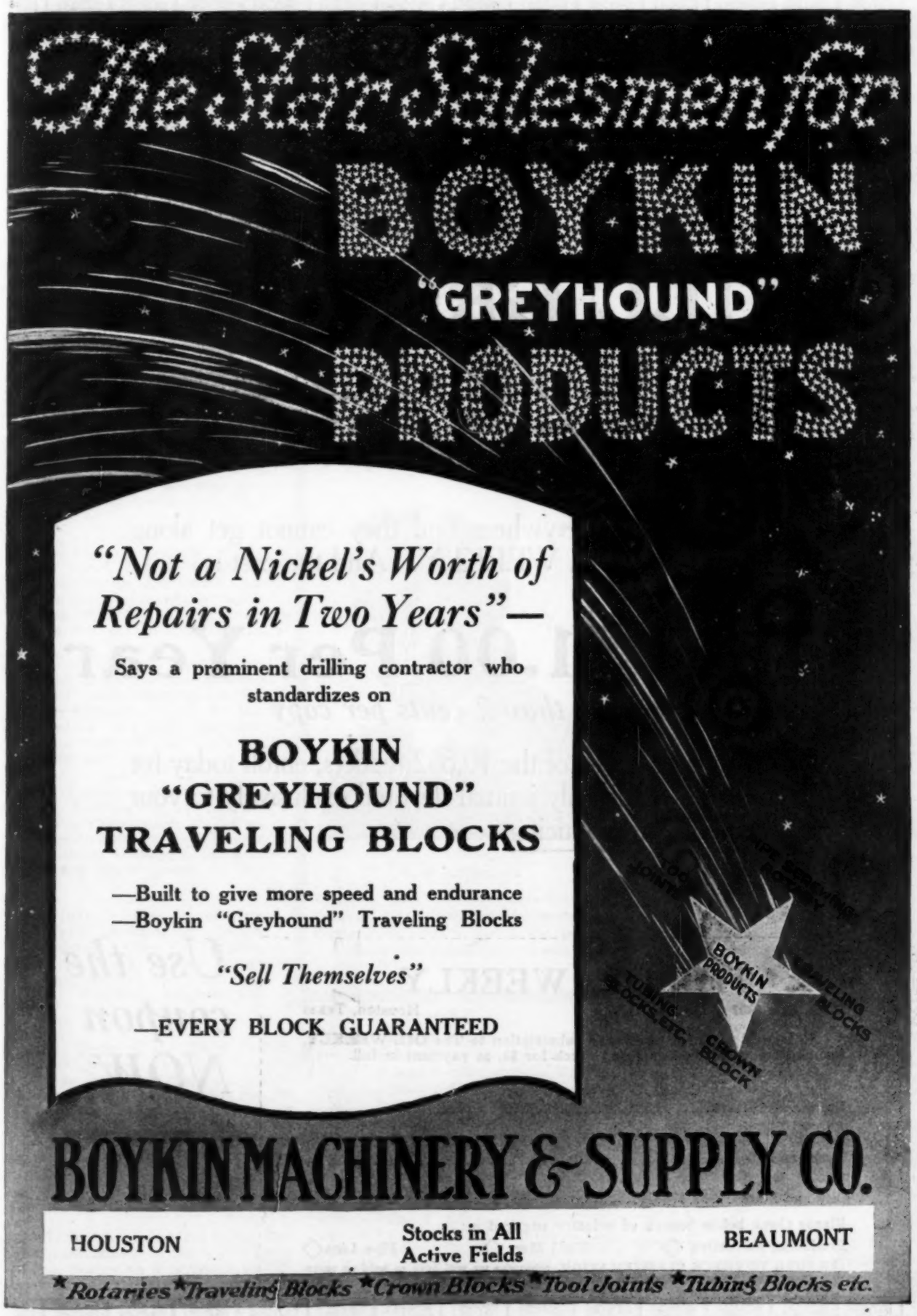
Each Field Has Own Method

In concluding, it is advisable perhaps, to repeat the note of warning in the introductory remarks; the warning to be careful about making too positive statements on the subject of flowing oil wells.

The good records of the wells at Brock, flowing against back pressure, might be improved upon by the stop-cocking method, or by flowing the wells through a flow-plug. We can not say. The encouraging results on stop-cocking might be improved upon by the use of the flow-plug. In the Marland pool in the Osage, it is interesting that the flow-plug has been tried on various other wells in the pool, but that they would not respond to this method. Horner T. Lamb of the Red Bank Oil Company, advises that an offset to Marland No. 1 Pettit has made its production by an open flow through 5 3/16-inch casing and is still flowing 400 to 500 barrels per day.

It seems to me quite possible that the flow-plug has increased the yield of the Marland well very greatly as compared to what it would have made with an open flow. Also, as there is a very small gas pressure, hydrostatic head is probably one cause of the large production that this well has made and it is quite possible that the flow-plug has helped to hold back the water and allow the well to make its oil.

The methods outlined in this paper have all been successfully demonstrated. Thought should be given to the subject while the wells are still new and before the gas volume and rock pressure have been dissipated. It is not costly to make tests to ascertain which method is best for your wells. Our objective is lower costs and higher yields. Proper handling of the well before it becomes a pumper will help pay dividends.



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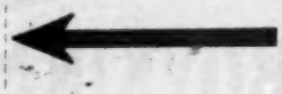

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PERSONAL MENTION-MEN YOU KNOW

Major E. H. Wilcox, chief engineer of the Pan American Petroleum Corporation, and J. C. Burnett, pipe line superintendent, both with Los Angeles headquarters, are in the Mid-Continent making a study of pipe line installations and pipe line construction. The Pan American is expected to start work in a few weeks on a welded line from Los Angeles Harbor district to Kern County.

John L. McMeans, manager of the Panhandle district office of the Producers and Refiners Corporation at Amarillo, Texas, has resigned to become engaged in the oil producing business for himself in the Central West Texas district shallow fields.

E. H. Morgan, well known drilling contractor of El Dorado, Kansas, is moving to Hutchinson in that state, where he will take part in the development work in that section.

L. A. Ogden, formerly of the United States Bureau of Mines, now is with the Empire Companies, having charge of the water plugging work in Kansas with hearquarters at Oil Hill in that state.

Among those who are entering the new Craig field in Moffat County, Colorado, is A. R. McClennon of Lawton, Oklahoma, who has been in the Wyoming fields for some time.

Nat Guiberson, R. A. Wilson and R. S. Haseltine, all of the Guiberson Corporation of Dallas, Texas, recently were in Oklahoma on a business mission, stopping at Tulsa and other points in the state.

Col. John R. Simpson of New York, vice president of Sinclair Consolidated Oil Corporation, sailed last week on the White Star liner Adriatic for a business tour of England, Belgium and France.

W. E. Bryan of the Wade Drilling Company was in Houston recently. Mr. Bryan has been completing drilling contracts in the Luling field for the last month or two. From now on he will concentrate on drilling in the Big Lake district in Reagan County. He operated the first rotary outfit to complete a contract in Reagan County. From Houston he went to San Angelo.

W. J. Sherman, secretary to the general superintendent of the South Texas division, producing department of The Texas Company, Houston office, made a motor trip to San Antonio and other points on his vacation.

Dr. H. H. Mundy of Pawhuska, Oklahoma, has been recently put in charge of all subsidiaries of the Middle States Oil Company, which includes the Turman Oil Company, Sure Oil Company, Southern States Oil Company, Plains Petroleum Company and the Verland Oil Company. Dr. Mundy is the son-in-law of T. J. Leahy, successful lawyer of Pawhuska and director of the Middle States Oil Company.

H. N. Larsen has been transferred to Montana to have charge of the interests of the Standard Oil Company of California. Until the transfer Mr. Larsen was assistant to Production Superintendent W. G. Black in Southern California.

A. W. LEONARD

Of Tulsa, Okla., president Hinderliter Tool Company, vice-president, Oklahoma Natural Gas Company and recently elected vice-president Natural Gas Association of America.

W. T. Dinkins, manager of the Western district of the Sinclair Refining Company, with headquarters in Kansas City, has been transferred to the New York office of the company.

Announcement has been made of the approaching marriage of Miss Pauline Menefee to Henry Kirkpatrick Arnold, secretary to W. S. Farish, president of the Humble Oil and Refining Company, Houston office. The wedding will be solemnized at the home of the bride's parents, Dr. and Mrs. Walter E. Fruit at Lorahale, Dickinson, Texas, June 30. Mr. and Mrs. Arnold will be at home at 4709 Austin street, Houston, following the bridal trip.

R. A. Boggess, driller who worked recently at Long Beach, and H. D. Curtis, who has been drilling in California fields for several years, arrived in New Orleans Monday to take a boat for Categena, a South American seaport. They will go up the Magdalena River about 450 miles to work for the Tropical Oil Company.

A party of drillers and tool dressers, all formerly employed by the Standard Oil Company of California at Taft, California, all young men, passed through Houston Monday enroute New Orleans to take a boat for South America where they will work for the Tropical Oil Company. They did not know their exact destination.

A recent visitor in the Rocky Mountain section was J. B. Adrian of Boise, Idaho, who is connected with Byron Superior Oil and Gas Company with headquarters at Spokane, Washington.

Max Ball, president of the Marine Oil Company, was a visitor at Casper recently, having come up from Cheyenne, Wyoming's capital city.

F. E. Spencer, president of the Lucey Manufacturing Corporation, is away from company headquarters in New York on a tour of the Mid-Continent and Gulf Coast fields.

James Warren of the Kinney-Coastal Oil Company of Denver, recently made a field trip through Wyoming, stopping at Casper and other points in that state.

C. H. Pittman, vice president of the U. S. Cities Corporation of Tulsa, has disposed of his interests in the company and intends to engage in the oil business for himself.

John Dickson of Oklahoma City, vice president and general manager of the Homaokla Oil Company, has gone to Boston to attend a meeting of the company's board of directors.

Chas. S. Oliver, who hails from Houston via automobile, has arrived in Los Angeles to act as sales representative of Rex Tools, and has established offices at 1171 East Thirty-Second Street, from which place he will furnish the Rex walking beam yoke, polish rods, etc. He spent three days at El Paso and would have remained longer if his wife had not been along.

L. P. Lochridge, manager of the northwestern district of the Sinclair Refining Company, with headquarters in Omaha, has been transferred to the New York office as manager of the domestic sales department.

Camp on desert near Coalinga.

Twenty-Six Miles of Welded Pipe Line Built Across California Desert in as Many Days

By W. E. Green

LAYING pipe lines in California to move oil is old to Mike Lang of the Mike Lang Transportation Company, Los Angeles. He laid lines on the Pacific Coast years ago when the machinery he had to work with was crude in comparison to that in use these days. Some of the improved methods of laying pipe lines are credited to him. Before very long he expects to take a contract to build another line of more than usual importance and covering a long distance, and then he says he will quit. Maybe he will, but his friends say Mike will quit when the doctor says it's all over.

Mike's last job was from Fellows to Coalinga, California, a distance of about 26 miles, and he completed his contract in just 26 days. That's the way he works, and his men will follow him just as long as Mike says "come on, boys." This line was laid in the section of the country where it gets hot as — during the day time. That's why they worked two shifts of 12 hours each.

The Associated Oil Company wanted to Siamese its old line to increase the movement of oil. The job was divided into six sections and there were six pump stations. Eight inch Youngstown pipe was used and it was welded. A total of 25 welders were on the job and, of course, 25 welding outfits. They called for oxygen filled tanks and acetylene, which had to be trucked from Los Angeles. But it was all in the day's work for Mike and his outfit.

Camps were located between the pumping stations, one section being completed and they would move to another. Sometimes it was so hot that the pipe expanded so much during the heated part of the day that the pipe would not lay straight after being welded. They had to wait until nightfall for the cool of the night so the pipe would contract and fit snug in the ditch.

A Buckeye traction ditcher was used to dig the ditch 2½ feet deep. The pipe was welded on skids over the ditch. The ditcher made a record of 8000 feet a day of 24 hours. After the pipe had been welded and placed the back filler was placed in service and this outfit covered four miles a day of 24 hours.

The story of the laying of this pipe line is a story of trucking heavy loads over desert roads, if you want to call them roads. The handling of large crews of men, moving the camp sites from spot to spot.

Some of the pictures accompanying tell even a better story. Hoisting the heavy 8-inch pipe from the railroad cars to trucks, the hoist being operated from another truck. The testing of the line for leaks and other incidents common to this kind of work.

Mike Lang has promised The OIL WEEKLY another story before very long, giving the dope on the next job he is to undertake. It will be worth reading.

He is taking life easy these days watching his son, whom he has raised in his footsteps, run much of the business. Mike says he is going to retire before long, but when he does he will be satisfied that that son of his will "carry on."

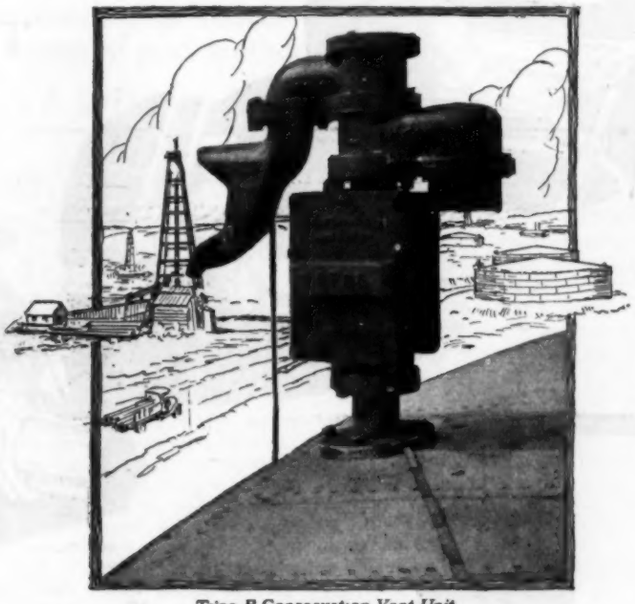
Left, Wm. Stubbs, pipe line superintendent for Associated Oil Company at Coalinga; Right, Mike Lang.

Crane mounted on a truck unloading casing to another truck.

Associated Drilling Wildcat in California

Los Angeles, Calif., June 14.—The Associated Oil Company is now drilling two wildcat wells in Southern California, not to mention two drilling wells in semi-proven territory in the Rosecrans area. One wildcat has been located at Baldwin Hills, where the company secured a lease on 112 acres, near which a well was drilled last year with a heavy gas show. The second wildcat is to be on the McNally Ranch, where the Associated has a lease of 400 acres. The Shell Company has a 400-acre lease in this area, while Marland has a lease on about 100 acres.

Better Vent Equipment



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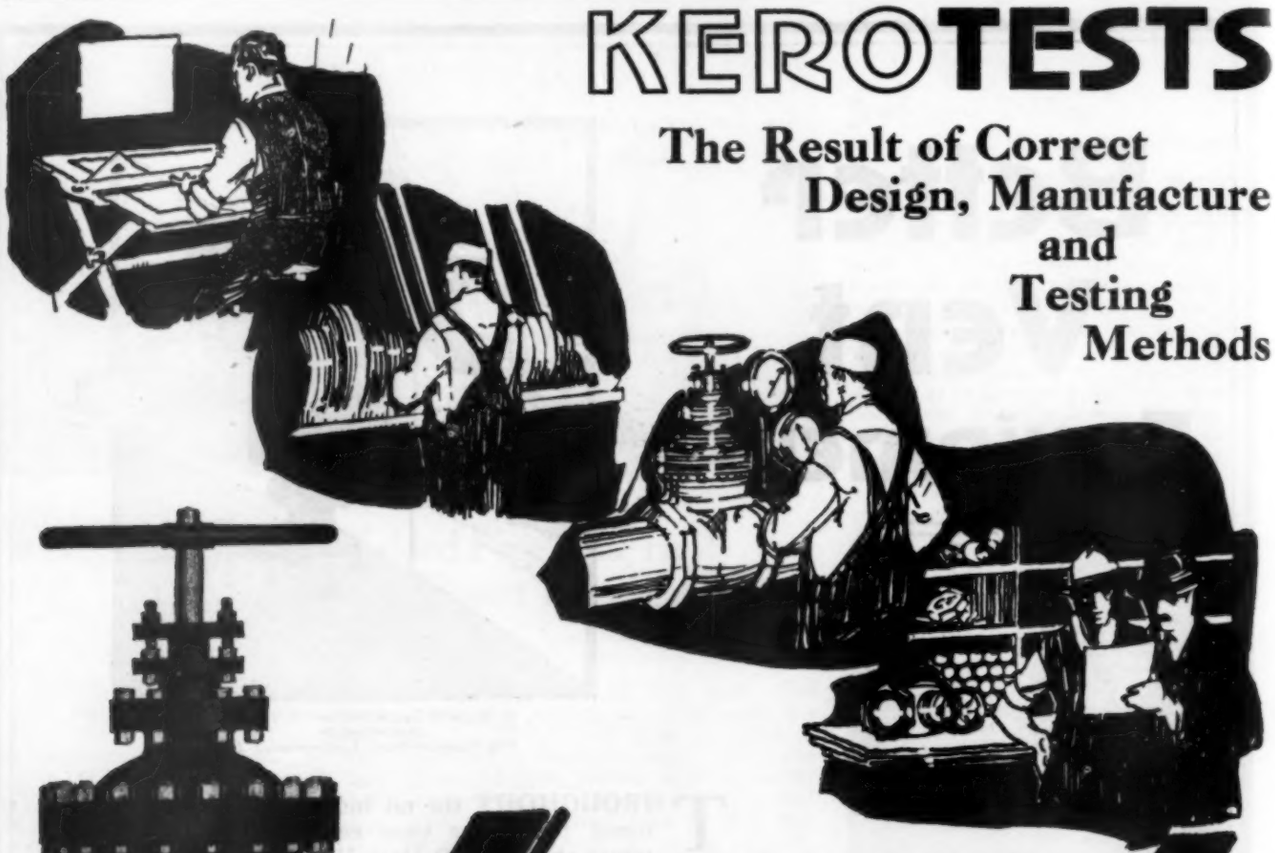

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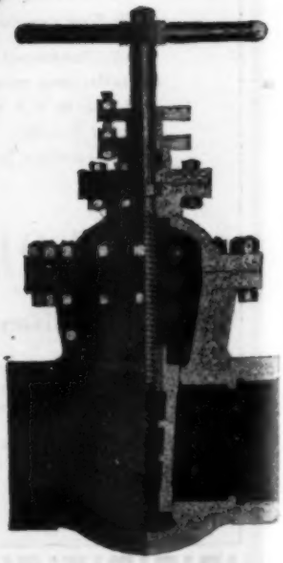

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The Mud Problem in Rotary Drilling

A review of operation practices shows many kinds of material and methods used

By R. E. Collom
*Former State Oil and Gas Supervisor, California**

THE TWO principal functions of the mud stream used in the mud flush system of rotary drilling are to carry cuttings to the surface and to keep the hole open, the latter without the immediate use of metal casing, as the drill passes through formations that have a tendency to cave. A third use, of a minor but important nature, is to cool the bit. The importance of this function has been shown in experiences with core barrels the end of which were buried in material of which a core was being taken and not exposed to the circulating mud stream. Sufficient temperature was produced by the combination of pressure and friction to fuse the cores.[1]

The mud stream adequately performs its function of removing cuttings from the hole. The identification of these cuttings has been found inadequate, however, for the preparation of a reliable log of a rotary drilled hole, and various types of core barrels are now extensively used for getting accurate knowledge of the nature of formations at critical depths. Adoption of the core barrel is the most important recent advance in rotary drilling practice.

It is well known that the purpose for which the mud is intended and used works against obtaining a good formation record in drilling. Water bearing sands are rarely logged in a rotary hole; oil and gas sands are frequently overlooked, due to the fact that the circulating mud penetrates and seals, partly at least, the porous strata.

The functions of mud fluid require more intelligent study and control in order to bring the rotary up to the standard of operating technique which has heretofore prevailed in the oil fields of California. It should be possible to establish certain physical standards for mud fluid. Much of the current damage and expense of redrilling, gas blowouts, frozen drill pipe and casing, is directly due to either the wrong kind of mud or careless or improper use of mud.

By proper control of the weight and viscosity of the mud, dependent to some extent upon its rather obscure colloidal properties, it should be possible to accomplish (1) rapid elimination of sand and shale cuttings and gas, as the mud flows from the hole, (2) a maximum sealing effect, where desired, and (3) a minimum penetration of the fluid or colloidal constituents of mud into formations from which it is desired to produce oil or gas.

It is already possible to record a few observations and also, from an analysis of the recorded results of mudding operations performed for the purpose of protection and conservation in various oil fields of California, suggest certain problems that could be the subject of beneficial study and experiment both in the laboratory and in the field.

Source of Mud Fluid

Under proper conditions the rotary tools will make their own mud by mixing drilling water with the cuttings of the shale and clay strata penetrated in drilling. The sedimentary strata of the oil fields of California are mainly sand, gravel, conglomerate, shale and clay. There are no limestone strata of importance. In some fields of the state, such as Coalinga, Midway and Montebello, large bodies of clay and shale predominate and furnish ample material for rotary mud. In other fields sand strata predominate or the shales are too hard or gritty to make suitable mud. In such cases it is necessary to haul mud from other fields, or clay from a surface deposit, in order to get proper material for the rotary mud. At Huntington Beach, strata of sand and sandy shale predominate and mud is hauled there in truck loads from the Montebello oil field. Lime refuse from a local sugar factory is also used in the drilling mud. At the Ventura avenue field surface clay is used because of a deficiency of subsurface mud-making strata. Clay is hauled from the Fullerton field and used for making mud at Santa Fe Springs.

The cost of drilling a wildcat well with rotary may be greatly increased due to the necessity of hauling mud from some distant oil field so that porous strata can be clogged and circulation of fluid maintained. In wildcat operations, or in fact in any drilling where the depth to and determination of productive oil strata are directly dependent upon the showings that appear on the ditch, it is important that the mud imported from an oil field be free of crude oil. Naturally the driller cannot tell whether or not the drill is entering oil bearing formations if the mud already contains oil.

Mud Fluid in Action

Mud fluid in action is supposed to wall up the hole, partly by penetration of mud into porous formations, partly by filling cavities created in caving formations with a clay pack, partly by the filter-packed clay material left on the porous walls of the hole, and partly by the wobbling actions of the rotary drill pipe. It is probable that the plastering action of the drill pipe is the least important one.

The mud fluid used in rotary drilling flows into a suction pit from a large sump hole. The boarded suction pits vary in dimensions but range around 7x7x8 feet to 8x12x5 feet.

The mud is drawn from the suction pit by a rotary slush pump, which then forces the mud through a flexible hose into the drill pipe.

Rotary Slush Pumps

Two duplex steam or power driven pumps, connecting into a manifold, are used. Two sizes are commonly used in rotary drilling, 12x6¾x14 inch and 12x6¾x12 inch. The pressures against which the pumps must work range from 100 pounds per square inch or less, to as high as 800 pounds per square inch. The mud cylinders have inside removable six and three-quarter inch liners which are used for low pressure work, and liners as small as four inches which are used for high pressures. The pumps are piston-packed. The parts most subject to wear by sand and grit in the mud fluid are liners, piston bodies, followers, valve seats, valves and piston rods, the wear varying in the order named. The pumps operate under 120 pounds steam pressure up to a maximum of 60 to 70 strokes per minute and average 30 to 40 strokes at a depth of 3000 feet.

The capacity of a 12x6¾x14 inch pump is about 1.15 cubic feet per complete revolution. Allowing 85 per cent efficiency, 15 per cent slippage gives a capacity of one cubic foot per revolution. Pump pressures when drilling will run higher than when circulating with the bit off bottom.

Drill Pipe

The mud fluid is pumped down through the drill pipe and out of the two holes drilled in the shank of the fish tail, roller or disk bit. The mud fluid jets out of the drill pipe with considerable force. In soft sand hole will be made by the force of the mud stream sluicing or hydraulicking the pipe down the hole in addition to the digging action of the bit. It is probable that the centrifugal sweep of the mud jet, although moving at 90 to 110 revolutions per minute, will not add force to the hydrostatic pressures being exerted on the mud fluid or wash the walls of the hole and, in either case, will not cause more active filtration of mud into the porous strata. A pump operating at 40 r.p.m. will give a 40 cubic foot discharge. The velocity of discharge through two seven-eighths inch holes in a 15 inch bit would be about 4800 feet per minute or 80 feet per second. This velocity is equivalent to a 40 pound head. At 2000 feet the hydrostatic head is about 1000 pounds per square inch and 40 pounds is an increase of only four per cent. The jets issuing from the "eyes" of the bit, surrounded by this mud under pressure, could not act in the same manner as a hydraulic jet working in air.

The porous strata are naturally most susceptible to infiltration just at the moment when they are first entered by the bit and exposed to the hydrostatic pressure of the mud stream. Circulation must be maintained during drilling and the outlet holes in the bit are the first place in the stream susceptible to obstruction. When the outlet holes become plugged, the driller spuds the drill string until the obstructions are jarred out of the holes.

The following table gives the diam-

*Reprinted from the Bulletin of the California State Mining Bureau.

[1]Case, J. B., Notes on the use of core barrels with rotary tools. Summary of Operations, California Oil Fields, Cal. State Min. Bureau, Vol. 7, No. 9, pp. 5-7. March, 1922.

eters and weights of drill pipe commonly used in California practice:

Drill Pipe	Outside dia. (inches)	Inside dia. (inches)	Thickness (inches)	wgt. (per ft. lb.)
6 inch	6.625	6.065	.280	19.55
4 inch	4.500	3.962	.269	12.5
3 inch	3.5	3.06	.218	7.9

The Rotary Hole

In fields where the strata are unconsolidated a well can be drilled and completed with rotary tools, using fewer strings of casing than for a hole of equal diameter and depth drilled with cable tools. The increased use of the rotary is due to its adaptability for landing long strings of large diameter casing to shut off water. It is common practice to land 2000 feet or more of 12½ inch casing and more than 3000 feet of 10 and 11 inch casing with rotary.

Cable tools, using the percussion system of drilling, have long been the leaders for deep hole drilling. The deepest hole in the world, the Lake well, eight miles southeast of Fairmont, West Virginia, was drilled to a total depth of 7579 feet with cable tools. Prior to the active development of Montebello, Richfield and Elk Hills with rotary, starting in 1917, Texas seems to have held the record for the deepest rotary drilled well. The Oil Age in September, 1916, reported the deepest rotary hole in the world to be on the property of Producers Oil Company, Humble pool, Texas. The hole was drilled 5410 feet. From 2342 feet to bottom, a distance of 3068 feet, the hole was drilled in salt.

This record has been broken through recent improvements in rotary practice in California. Standard Oil Company drilled well No. "Packard" 1, section 16, township 31 south, range 24 east, M. D. B. and M., to a total depth of 6240 feet using rotary tools. A well was drilled in section 34, township 24 south, range 19 east, M. D. B. and M., near Kettleman Hills, Kings County, using rotary tools from the surface to 3500 feet, then cable tools to 4070 feet, and then rotary to a total depth of 6602 feet. Standard Oil Company drilled well No. "Baptist" 1, section 16, township 30 south, range 24 east, M. D. B. and M., Kern County, to a total depth of 5909 feet with rotary tools.

The diameters of rotary holes depend largely upon whether or not conductor casing is being used. Usually a larger diameter hole is drilled with rotary, for any specified diameter of casing, than with cable tools. Thoms[2] and Smith give the following data on diameters of rotary holes for various diameters of casing when drilling with no conductor casing or through conductor casing:

Drilling without conductor-open hole		Drilling through conductor		
Diam. of hole (inches)	Diam. of cas. to be used (inches)	Diam. of conductor (inches)	Diam. of hole (inches)	Diam. of cas. to be used (inches)
19 to 20	15½	15½	15	10 or 12½
17¼ to 18	12½	12½	12	8¼
17½ to 15½	11	11	10¾	8¼
15 to 15½	10	10 reamed to	11	8¼
10 to 12	8¼			

If a long string of eight and one-quarter or 10 inch casing is to be set without conductor pipe, the upper part of the hole is usually drilled with a bit some two inches greater in diameter than the lower half of the hole. Where a small hole or pilot is drilled for prospecting ahead into oil, the hole is enlarged or underreamed down to a shoulder upon which the casing is to be set for cementing. If eight and one-quarter inch casing is to be landed in a hole drilled through a 10 inch conductor, the hole is first drilled with as large a bit as will pass through the 10 inch casing and then enlarged by using an underreamer. The underreamer, with expanding cutters, will enlarge the diameter of the hole from one to two inches greater than that of the conductor pipe.

It is an advantage to have a hole of considerably larger diameter than the casing. If the hole is slightly crooked there is still some leeway for the casing being easily worked and kept straight. The large hole provides room to work to advantage in fishing jobs, especially in fishing out lost drill pipe with washover pipe.

The diameter of the hole also has a direct bearing upon the absorption or filtering capacity for mud of any porous formation. The total area exposed, as the face of a filter, to mudding action can be computed from the thickness of formation and diameter of hole. For example, a sand 50 feet thick is mudded through a 12 inch hole. The area of the exposed face of the stratum to each vertical foot of thickness is 3.14 square feet; that is, mud fluid is applied

[2]Thoms, C. C., and Smith, F. M., Notes on Elk Hills Oil Field. Summary of Operations. California Oil Fields, Vol. 7, No. 1, Cal. State Min. Bur., July, 1921, p. 16.

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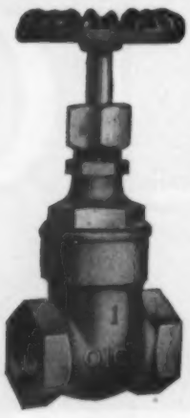

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to the interior of a cylindrical sand filter having an area of 50 times 3.14 square feet, or 157.1 square feet. However, if the sand (same thickness, 50 feet) is mudded through a six inch hole, the face of the filter through which mud must be applied will be 78.5 square feet. The area of outlet into a sand to be mudded through a six inch hole is only half that of the area exposed in the 12 inch hole.

Comparative data may be obtained by reducing thickness of strata and diameters of hole to the common term of "exposed area." This is shown in the following table:

Examples of Variation in Exposed Filter Area for Holes of Various Diameters and Depths

Well number	Thickness of sand (feet)	Diameter of hole (inches)	Exposed area Sq. Ft.
1.....	50	12	157.1
2.....	50	8	104.5
3.....	50	6	78.5
4.....	25	12	78.5

Casing Programs

The above two-column table shows some typical casing programs for conductors and water strings from several rotary drilled oil fields:

In the above tabulation of casing programs a rough estimate is given in the last column of the average depth of open hole between surface conductor, if any, and the primary water string. For the various fields mentioned the amount of open hole during rotary drilling varies from 1600 feet in casing program B at Long Beach to 3000-3100 feet at Richfield.

The proportion of thickness of porous formations to that of relatively impervious formations in open hole has an important bearing on the amount of mud fluid absorbed and the proper control thereof during drilling. After the mud fluid leaves the bit and comes in contact with freshly drilled strata, or, either in rest or motion, with the exposed faces of porous formations containing oil, gas or water, at any depth in the open hole, it does an important work in altering the physical condition of the formations.

The amount of clearance between the inside of one diameter of casing and the outside, including added thickness of collars, of the next smaller diameter of casing is an important consideration in rotary casing programs. In cable-tool drilling 12½-inch casing is used inside of 15½-inch, 10-inch inside of 12½-inch, and 8¼-inch inside of 10-inch. The casing programs given in the table show a 10-inch water string inside of 15½-inch conductor casing or 8¼-inch water string inside of 12½-inch casing. For the diameters and weights of casing customarily used this is considered to be the most practical means of obtaining a safe clearance or passageway between casings for the unobstructed flow of mud fluid. This is in addition, of course, to the other purpose, already mentioned, of drilling as large diameters of hole as possible through and below one string of casing for reception of the next smaller size of casing.

In circulating mud fluid while running casing into the hole, or establishing free and open circulation just before cementing, it is necessary to have sufficient clearance to avoid freezing of the casing due to cuttings and sand clogging the small passageways, especially where reduced at couplings, between casing.

In Fig. 1 is shown a graphic representation of gross thickness of couplings and casings for certain diameters and weights commonly used in California and the clearances between casings. For example, the clearance between 8¼-inch 36-pound casing and 10-

Rotary Casing Programs

Field		Range of depths for various diameters casing						Average depth main open hole
		20-inch	15½-inch	12½-inch	11-inch	10-inch	8¼ inch	
Elk Hills	A					2700 to 2900		
	B				2700 to 2900			2800
Santa Fe Springs	A		600 to 1200			3200 to 3600		2500
	B	100		1800 to 2200			3500 to 4200	1800
Long Beach	A		300 to 1500			2600 to 3600		2600
	B	300		1000 to 1800			2600 to 3300	1600
Richfield	A		500			2800 to 3500		3100
	B	200				3200	3800	3000

Figure 1.

CHART

SHOWING CLEARANCE BETWEEN VARIOUS SIZES OF CASING

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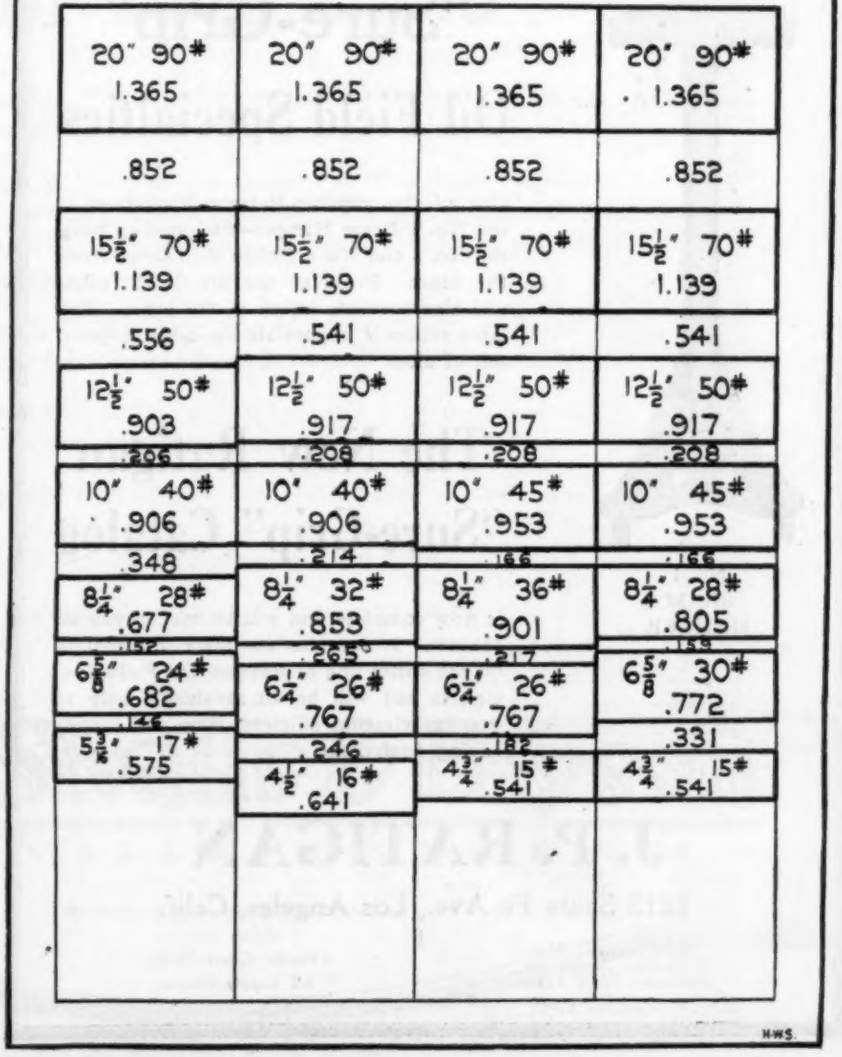

inch 45-pound casing is a little over .16 of an inch; the clearance between 10-inch 45-pound casing and 12½-inch 50-pound casing is .21 of an inch. These spaces are not large, and can easily become clogged by the accumulation of cuttings and sand.

The fact that 10-inch casing is used with 15½-inch casing, or 8¼-inch with 12½-inch casing, does not mean that these are necessarily the best ratios for the purposes mentioned. They are the only practical ratios at hand. A few companies use 11-inch casing, instead of 12½-inch, when the next smaller string is to be 8¼-inch. The 11-inch casing satisfies the two requirements mentioned above. In addition, where a long string of casing is necessary it has a greater strength to resist collapse than 12½-inch casing. The series of 12½-inch casings of various weights has the lowest resistance against collapse[2] of all diameters of casing in common use.

The oil well casing now being used in rotary drilling was originally designed and developed for use with cable tools. No great modifications in design have been made to conform with the requirements of rotary practice. This is a matter deserving of study by oil operators and manufacturers of casing.

In critical operations such as those mentioned above it is important that the mud fluid be circulated long enough to remove all cuttings and sand from the hole. In order to do this after drilling stops all fluid outside the drill pipe should be circulated out of the hole.

A test was made in a rotary hole 3310 feet deep[4] to determine the length of time it took cuttings to travel from the bit to the surface. Two quarts of red paint were put into the drill pipe at the surface and it required 2 hours and 33 minutes for the paint to make the round trip. The pump had 11-inch stroke, 6¼-inch liners, and the combined strokes per minute were 80. Six-inch drill pipe was used.

A hole 3310 feet deep containing drill pipe will hold about 500 barrels of mud fluid, allowing 25 barrels for thickness of drill pipe. The total time for displacement of the 500 barrels of mud fluid minus the time it takes to displace the capacity of the drill pipe gives the time it would take for the last of the cuttings to reach the surface after drilling is stopped.

In the experiment with the paint the total time of the round trip for the paint is divided, to and from the bit, in the ratio of the squares of the radii of the drill pipe and of the hole. The ratio is as $(3)^2$ is to $(6.25)^2$ or as 9 is to 39.06. That is, for a six inch drill pipe in a 12½ inch hole 3310 feet deep a round trip which requires two hours and 33 minutes will be divided into 36 minutes to the bit and one hour and 57 minutes from the bit to the surface. The observed time of travel checks closely with the computed time for the various factors involved.

Suman[5] gives a formula for computing time of travel of cuttings from the bit to the surface. He allows 60 per cent efficiency for pump due to the strokes being shorter than the rated strokes. This formula, which follows, should be useful in computing data similar to those given above:

$$N = \frac{D\,(R^2 - r^2)\,E}{X^2\,y\,z}$$

Where N equals number of minutes for fluid to be expelled from hole and sample from the bit to be brought up;

R equals radius of drilled hole (half diameter);

r equals radius of drill pipe (half diameter);

D equals depth of hole in inches;

X equals radius of pump cylinder (half diameter);

y equals stroke of pump;

z equals pump impulses per minute, that is, 2 times number of strokes on both sides;

E equals efficiency of pump.

The formula does not take into account the displacement of metal in the drill stem assembly.

Pressures of Open Circulation

When mud fluid is being circulated through the drill pipe and out of the hole by the pump the pump gauges register a considerable pressure. The pressure of open circulation is due partly to the frictional resistance of the mud fluid against the drill pipe and walls of the hole, partly to the greater hydrostatic pressure of the upward moving stream loaded with cuttings than the downward moving stream free of cuttings, and partly to the speed of the pump. Pressures of open circulation vary considerably even where

[2]For table on collapsing strength of casing see Bull. 73, Cal. State Min. Bur. First Annual Report of State Oil and Gas Supervisor.

[4]Collom, R. E., Prospecting nd testing for oil and gas. U. S. Bureau of Mines. Bull. 201.

[5]Suman, J. R., Taking samples with rotary. The Oil Weekly, July 3, 1920, p. 47.

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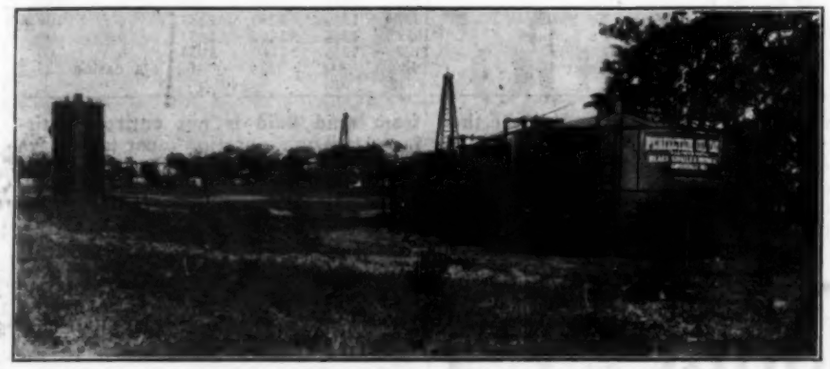

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Company	Well No.	Sec.	Township	Range	Field	Conductor Depth (feet)	Conductor Diameter (inches)	Depth hole (feet)	Depth open hole (feet)	Diameter drill pipe (inches)	Pressure open circulation (lb. per sq. in.)
Standard Oil Company	"M. C." 89	18	3 S.	10 W.	Coyote Hills	378	15¼	3448	3070	6	60
Standard Oil Company	"M. C." 90	18	3 S.	10 W.	Coyote Hills	368	15¼	3217	2849	6	55
Miley-Keck Oil Company	15	2	6 S.	11 W.	Huntington Beach	646	15½	2410	1764	6	115
Pacific Petroleum Oil Corporation	7	2	6 S.	11 W.	Huntington Beach	700	15½	2608	1908	6	100
Rhoads Oil Company	4	11	6 S.	11 W.	Huntington Beach	680	12½	2550	1870	6	115
Standard Oil Company	5	2	6 S.	11 W.	Huntington Beach	450	15½	2500	2050	6	100
Leonard Jones	1	29	4 S.	12 W.	Long Beach	1501	12½	2703	1202	6	140
Honolulu Consolidated Oil Co.	3	6	32 S.	24 E.	Midway	1768	10	2080	322	6	100
Murvale Oil Company	M-5	28	31 S.	23 E.	Midway	500	12½	3326	2826	6	100
Pacific Oil Company	31	1	32 S.	23 E.	Midway	1755	12½	2140	395	6	150
Amalgamated Oil Company	1	6	3 S.	11 W.	Santa Fe Springs	1227	12½	3250	2023	6	100
George F. Getty	1	5	3 S.	11 W.	Santa Fe Springs	1977	12½	3460	1483	6	90
Pan-American Petroleum Co.	3	36	30 S.	23 E.	Elk Hills	1127	12½	2160	1033	6	60
Pacific Oil Company	62	5	11 N.	23 W.	Sunset	2389	8¼	2519	130	6¼ casing	25

depths of hole and quantities of open hole are similar.

The following are observed pressures of open circulation through drill pipe in a number of drilling wells:

Separation of Sand and Cuttings

The separation of sand and cuttings from the mud fluid is effected while the stream is flowing along the rotary ditch and to some extent during the time the mud fluid stands in the main sump. The settling rate is quite slow.

For several reasons the present method of separation of cuttings and sand from mud fluid is not entirely satisfactory. The separation must take place in fluid in fairly rapid motion while flowing through a box trough about two feet wide and 70 to 100 feet long with a drop of probably one foot distributed more or less uniformly throughout the total length of the trough. The maximum rate and volume of flow would be about 300 barrels per hour. With this rapid motion much of the finer sand is returned to the well, which causes cutting and wear upon the moving parts of the pump, loss in the value of the mud as a sealing medium, and hinders the operation of the drill pipe. One operator estimates that an excess of sand over six per cent by volume will be detrimental to drilling operations and possibly lead to freezing of the drill pipe.

The cuttings are not regularly cleaned from the ditch, which partly destroys is effectiveness as a classifier. In a field where sand or sandy shale strata predominate, such as Huntington Beach, a poorly attended ditch will quickly become filled with sand, thereby greatly decreasing the capacity of the ditch and increasing the rate at which mud fluid flows through it.

Some experiments have already been made with mechanical classifiers based upon principals used in metalliferous milling practice. Several of the larger companies are now operating a few mechanical classifiers with rotary tools. A properly designed and operated classifier should have many advantages over the present means of separating cuttings in the rotary ditch.

The cuttings can be immediately removed from the mud as it flows from the hole, and the mud will be available for circulating back into the hole. The long wooden ditch will be eliminated and with it the necessity of closely watching it and keeping the cuttings and sand shoveled out in order to maintain clean mud. A more even mixture of mud fluid as to weight and thickness can be maintained. Water can be added for thinning the fluid, when necessary, in a manner that can be controlled. Occluded gas can be quickly eliminated from gas-cut mud, thus making the mud immediately available for re-use and obviating the necessity of frequently changing the mud when drilling through high pressure gas strata.

Any classifier designed for the above conditions should be able to meet the following requirements: (1) Handle a maximum of about 300 barrels of mud fluid per hour; (2) handle and eliminate from the mud fluid a maximum of 1 ton of cuttings and sand per hour; (3) handle various mud fluids through a working range of specific gravities from 1.0+ to 1.35; and (4) be a simple mechanical device, in a single unit,

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easily operated and requiring little attention.

Shell Company of California operating in the Ventura oil field and Long Beach oil field, General Petroleum Corporation in the Santa Fe Springs oil field, and Pacific Oil Company in the Midway oil field, have been using a mechanical classifier with rotary tools at a few wells.

The apparatus consists of a revolving drum about 4 feet in diameter and 10 feet long, set horizontally, with ⅛x⅜-inch mesh screen forming the surface of the cylinder of an iron frame. The frame of the drum is composed of 6 sets of spokes, 4 spokes per set, radiating from a 2-inch steel shaft running through the drum. The ends of the shaft rest on bearings which are supported by a sub-frame made of channel iron. The device is set at right angle to the trough through which the mud flows and at a sufficient depth below the trough to allow the mud to strike upon the turbine well above the axis. At the intake end is a bucket turbine arrangement, making the action of the drum automatic with the flow of the mud. A spiral deflector plate about 2 inches wide leads from the turbine end of the drum to the outlet end. This deflector carries the sand and discharges it as the drum revolves. The mud flows through the holes in the screen into a hopper and thence through a short ditch into the pit, where it is ready to pump back into the well.

Clear water is introduced into the mud stream, as it flows from the hole and before it enters the drum, in such quantities as will give the desired consistency of mud fluid. A wash pipe filled with small holes is suspended lengthwise above the drum to spray the drum and keep the mesh open.

A special "hydrometer" made of sheet metal in the form of a truncated cone is kept floating in the mud pit for the purpose of maintaining a uniform specific gravity of the mud.

Criticism of the apparatus is to the effect that it does not separate fine sand from thick mud fluid where it is necessary to use thick fluid in order to get the greatest possible weight or hydrostatic pressure from the mud.

Physical and Chemical Properties of Mud Fluid

Mud fluid is a mixture of clay and water. Rotary mud fluid is usually burdened with varying quantities of fine sand and finely broken cuttings of the harder rocks penetrated in drilling. Its mechanical functions in a rotary hole have already been mentioned. The uncontrolled, or little observed, secondary functions of mud fluid are deserving of a great deal of study and improvement.

The chemical or mineralogical constituents of the argillaceous materials from which the mud is made, during drilling are of interest: First, because the viscosity of mud fluid depends largely upon the amount of colloid-forming material in the clay or shale; and, second, certain oil field clays or shales carry appreciable quantities of chemical compounds, such as ammonia and common salt, which, if mixed with the mud fluid in use, can alter its colloidal condition.

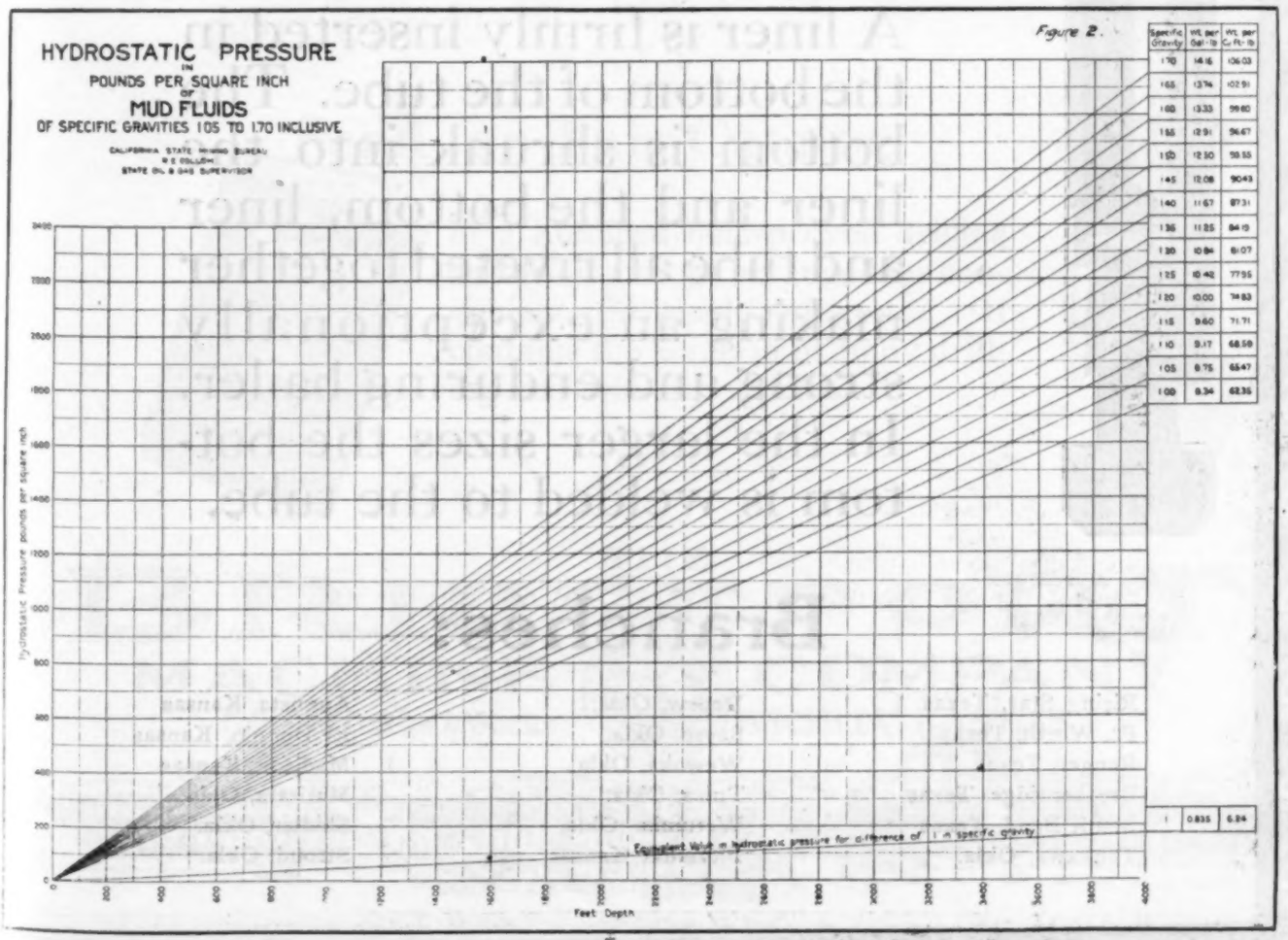
We know that mud fluid has a higher hydrostatic value than water. Mud fluid is commonly described as thick or thin, heavy or light. The idea of mobility is frequently confused with the idea of weight. A thick mud is not necessarily a heavy mud. A driller ascribed the cause of pipe sticking to the mud being too heavy; he really meant that the mud was too thick.

To increase the weight of the mud, and hence its hydrostatic value, its clay content must be increased; but, in adding more clay, its viscosity or thickness is greatly increased. Heavy mud is desirable for holding back caving formations and keeping high pressure fluids in check; but the weight attainable is limited by the necessity of keeping the fluid as thin as possible so that cuttings and sand will be quickly eliminated.

In drilling into oil bearing formations it is desirable that the minimum of mud, or water filtered out of mud, penetrate the sand. Otherwise when the well is being washed and swabbed for production some difficulty may be experienced in getting the well to "clean itself."

Two means of giving weight to the fluid present themselves. One is mechanical, that is by mixing some heavy

Figure 2.



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mineral, such as iron oxide as reported by Stroud[a]; the other is chemical, by increasing the clay content and at the same time thinning the mud fluid by adding a reagent, such as sodium silicate.

Specific Gravity

Clean rotary mud as used in California fields will vary in specific gravities from 1.05 to 1.35.

In early attempts to record specific gravities of mud fluid hydrometers were used. The hydrometer would not accurately record the specific gravity because of interference of movement due to the viscosity of the fluid.

Specific gravities are determined in the field by weighing a measured quantity of mud fluid. The weight per gallon or per cubic foot is converted into specific gravity by comparison with the weight of an equal volume of water. This method is sufficiently accurate for comparative purposes and oil field work.

Mud fluids are more commonly compared in oil field practice by weight than by specific gravity. Almost anyone can visualize a gallon or cubic foot measure, and therefore a 10-pound mud meaning 10 pounds per gallon, or 70 pound mud, meaning 70 pounds per cubic foot, is something more easily understood than a specific gravity of 1.2.

In the Department of Petroleum and Gas the inspectors are furnished with a gallon of mud fluid will fill the container just to the bottom of a circular ridge one-fifth of the way down from the top. They also have scales which five-quart containers, calibrated so that will read to 30 pounds and will record accurately a difference of 1 ounce in weight. The scales are adjusted with a red pointer so that when the bucket is empty and on the hook the red pointer is at zero. The tare weight, or net weight of the mud, can then be read directly from the red pointer.

Samples of ingoing and outgoing mud are weighed and results recorded in terms of pounds per gallon, pounds per cubic foot, and specific gravity.

Weights of mud are recorded during mudding and cementing operations. Depths of hole and other data are also recorded.

In no case is the mud sample selected. The sample of ingoing mud is taken as close to the pump suction as possible. The sample of outgoing mud, including its burden of cuttings, is taken as close to the hole as possible. The mud column outside of the drill pipe may have considerable additional weight due to its burden of cuttings. In some cases thinning of the mud by water, or cutting by gas, will show in the weight.

The followin are some of the specific gravities for mud fluids in various oil fields:

[a]Stroud, B. K., Mud-laden fluids and tables on specific gravities and collapsing pressures, La. Dept. of Conservation. Technical Paper No. 1, March, 1922.

Specific Gravities of Mud Fluid in California Oil Fields

Field and Company	Well No.	Section	Township	Range	Specific gravity of mud fluid: Ingoing mud	Outgoing mud	Remarks
Ventura, Shell Co.	"Edison" 1	28	3 N.	23 W.	1.25	....	
Ventura, Shell Co.	"Taylor" 2	28	3 N.	23 W.	1.25	....	To kill gas flow.
Ventura, Shell Co.	"Taylor" 2	28	3 N.	23 W.	....	1.11	Contained gas and oil.
Ventura, Shell Co.	"Taylor" 1	28	3 N.	23 W.	....	.82	Black, gas-cut returns.
Midway, Honolulu Consolidated Oil Co.	2	6	32 S.	24 E.	1.14	....	
Midway, Caribou Oil Mining Co.	5	28	31 S.	23 E.	1.28	....	Heavy mud, settles very little.
Midway, Associated Oil Co.	4	26	31 S.	23 E.	1.15	....	
Midway, Pacific Oil Co.	31	1	32 S.	23 E.	....	1.14	
Huntington Beach, Argonaut Oil Co.	1-A	2	6 S.	11 W	1.18	....	
Huntington Beach, Miley-Keck Oil Co.	9	34	5 S.	11 W.	1.2	....	
Huntington Beach, Miley-Keck Oil Co.	29	2	6 S.	11 W.	1.18	1.19	Circulated at rate of 180 bbl. per hr.
Huntington Beach, Union Oil Co.	"Newland" 2	1	6 S.	11 W.	1.2	1.23	Circulated at rate of 160 bbl. per hr.
Huntington Beach, Standard Oil Co.	7	2	6 S.	11 W.	1.19	1.2	Circulated at rate of 100 bbl. per hr.
Huntington Beach, Standard Oil Co.	2	2	6 S.	11 W.	1.13	1.16	Circulated at rate of 82 bbl. per hr.
Huntington Beach, Standard Oil Co.	16	2	6 S.	11 W.	1.2	1.2	Circulated at rate of 105 bbl. per hr.
Huntington Beach, Standard Oil Co.	15	2	6 S.	11 W.	1.22	1.3	Mud carried considerable sand out of hole. Circulated rate of 130 bbl. hr.
Huntington Beach, Standard Oil Co.	14	2	6 S.	11 W.	1.15	1.1	Mud gas-cut. Circulated at rate of 90 bbl. per hr.
Huntington Beach, Standard Oil Co.	13	2	6 S.	11 W.	1.15	1.16	Circulated at rate of 125 bbl. hr.
Huntington Beach, Standard Oil Co.	7-A	2	6 S.	11 W.	1.12	1.15	Mud frothy from gas. Circulated at rate of 390 bbl. per hr.
Huntington Beach, Shell Co.	5	2	6 S.	11 W.	1.17	1.20	
Huntington Beach. Shell Co.	4	2	6 S.	11 W.	1.2	1.16	Circulated at rate of 240 bbl. per hr. Outgoing mud contained oil and gas
Huntington Beach, Shell Co.	1	2	6 S.	11 W.	1.15	1.15	Circulated at rate of 260 bbl. per hr.
Huntington Beach, Petroleum Midway Co., Ltd.	2-A	2	6 S.	11 W.	1.17	1.21	
Huntington Beach, Petroleum Midway Co., Ltd.	2	2	6 S.	11 W.	1.31	....	Drill pipe froze—probably due to excessively heavy mud.
Huntington Beach, Petroleum Midway Co., Ltd.	2-A	2	6 S.	11 W.	1.33	1.35	
Huntington Beach, Miley-Keck Oil Co.	11	2	6 S.	11 W.	1.10	1.11	Mud was badly cut with gas.
Long Beach, General Petroleum Corp.	"K & H" 1	19	4 S.	12 W.	1.20	1.18	
Long Beach, General Petroleum Corp.	"Scoco" 2	20	4 S.	12 W.	1.1	....	
Long Beach, General Petroleum Corp.	"Scoco" 1	20	4 S.	12 W.	1.08	....	
Long Beach, Shell Co.	"Shaver" 1	20	4 S.	12 W.	1.15	1.15	
Long Beach, Shell Co.	M-2	20	4 S.	12 W.	1.1	1.1	
Long Beach, Shell Co.	"Andrews" 2	20	4 S.	12 W.	1.18	....	
Long Beach, Petroleum Midway Co., Ltd.	G-1	29	4 S.	12 W.	1.17	....	
Long Beach, Shell Co.	W-2	29	4 S.	12 W.	1.11	....	
Long Beach, Shell Co.	W-1	29	4 S.	12 W.	1.14	....	
Long Beach, Shell Co.	P-3	29	4 S.	12 W.	1.2	....	
Santa Fe Springs, General Petroleum Corp.	"S. F." 61	5	3 S.	11 W.	1.11	1.12	Heavy mud free from sand.
Santa Fe Springs, General Petroleum Corp.	"S. F." 52	5	3 S.	11 W.	1.12	1.13	Mud fluid thin, no sand in ditch.
Santa Fe Springs, General Petroleum Corp.	"S. F." 52	5	3 S.	11 W.	1.14	1.2	
Santa Fe Springs, General Petroleum Corp.	"S. F." 6	5	3 S.	11 W.	1.17	1.17	
Santa Fe Springs, Petroleum Midway Co., Ltd.	M-3	6	3 S.	11 W.	1.16	1.16	
Santa Fe Springs, Petroleum Midway Co., Ltd.	S-1	6	3 S.	11 W.	1.2	1.12	
Santa Fe Springs, George F. Getty	S-6	6	3 S.	11 W.	1.14	....	

Viscosity of Mud Fluid

The viscosity or stickiness of mud fluid is the property having the greatest influence upon its proper uses in rotary drilling. For comparison of various muds, that is, for distinguishing between good drilling muds and poor drilling muds, viscosity is a far better basis of comparison than specific gravity. In other words, it would be much more desirable to standardize muds, if possible, upon a viscosity basis than upon specific gravities.

Little has been done in a systematic way toward determination of viscosity of mud fluids. It is still a question as to what is the proper type of viscosimeter to use. Viscosities of liquids are usually expressed in terms of flow resistance as compared with some standard liquid.

The Standard Oil Company in its laboratory tests has used a McMichael viscosimeter. This instrument measures the tangential friction of a liquid against a disk suspended, from a calibrated wire, in a cup of the liquid rotating at a constant speed. The viscosity factor is expressed in terms of angular displacement compared with water.

A viscosity determination, together with a mechanical analysis in a centrifuge, offers a better means of judging the quality of a mud, for its mechanical uses, than specific gravities.

The following data showing mechanical analyses and viscosities of several mud samples are furnished by Standard Oil Company. These data were determined by centrifuging mud fluids in 100 c.c. tubes for 20 minutes; determining the amount of coarse sand, fine sand, mud and colloidal liquid. The mud and colloidal liquid above the mud were then tested for viscosity.

(To be concluded in next issue)

FIELD NOTES AND PRODUCTION STATISTICS

Oklahoma Production on Upward Trend

Cromwell, Tonkawa and Stroud particularly active while shut-down plans are being talked

Tulsa, Okla., June 18.—While Oklahoma operators are busy with shut-down plans, curtailment of runs and pipe line connection rumors, the production of the state continues to climb as proven fields and wildcats continue to send in reports of additional oil.

Cromwell, Tonkawa and Stroud is the triangular group which holds the attention of operators as wells daily hit the pay and force their production into the pipe lines and tanks.

Added to the potential production arears of these fields of Oklahoma comes the report of another sale in the Burbank, some of the tracts for sale being offset leases to big production. One tract for sale being an offset 160-acre tract to the lease of the Prairie Oil and Gas Company lease in the southwest quarter of section 11-27-5, on which their No. 8 well was recently completed for an initial flow of 2384 barrels from a total depth of 3011 feet. Another offset lease to a tract for sale is the Twin State lease in the southwest quarter of section 16-27-6, on which that company brought in its No. 7 well for a flow of 720 barrels during the first 24 hours from a sand at 2980 feet.

The Pennock Oil Company No. 7-E Endicott, in the deep pay of Tonkawa has drilled to a total depth of 4145 feet, increasing the production to 2597 barrels per day. With this result the potential production of the deep sand at Tonkawa now seems to be a determining factor in the future increased production of that field. The Pennock Oil Company deep pay well is located in section 34-25-1 west, three-quarters of a mile from the discovery well of the deep sand found by T. B. Slick and the Comar Oil Company.

Cromwell Increasing

Drilling in of new wells in the Cromwell field is increasing the production materially. Latest wells to drill in have been the Gypsy Oil Company's Nos. 2 and 3 Stidham, in section 15-10-8, which made 20 barrels per hour each, No. 2 producing from 3493-3516 feet and No. 3 producing from 3441-3464 feet. These wells should increase their production when deepened. Joe Cromwell's No. 1, in section 16-10-8, which started off with an initial flow of 917 barrels, has been drilled to 3520 feet, increasing its output to 1230 barrels, and the Tidal Osage Oil Company's No. 2, in section 21-10-8, has drilled one foot deeper and the production has been increased to 105 barrels per hour.

The next wells to be drilled in will be the Snowden-McSweeney No. 1, in section 15-10-8, which is pulling the big pipe at 3310 feet; and the Tidal No. 4, in the northeast of the northeast of section 21-10-8, which is drilling at 3300 feet. Wilcox Oil and Gas Company's No. 4 Bruner, in section 15-10-8, is making 2723 barrels from a total depth of 3470 feet; Cosden Oil and Gas Company's No. 2, in section 22-10-8 is making 651 barrels from 3411-56 feet; the Gilliland and Livingston No. 2 well, in section 15-10-8 is making 2050 barrels compared with an initial production of 2410 barrels from a total depth of 3482 feet.

In view of the fact that lightning struck the Tidal No. 2, in section 21-10-8, operators at Cromwell have been reminded that they must use the utmost care in handling the gas of the field because storms at this time of the year are frequent and the country is rough and full of canyons which invite the settling of gas and he coaxing of the electric spark. The danger of fire is also increasing there as more steel storage is being built.

Joe Cromwell, discoverer of the field which bears his name, has deepened his No. 1 in 16-10-8 to 47 feet in the sand found at 3473 feet increasing its production to 100 barrels per hour. This is the deepest any well at Cromwell has been drilled in the sand and it found the big pay at 3518 feet, stopping at two feet in. It is probable that the production could be increased further by drilling deeper.

Grieves and others' well in the center of the south line of the southeast of the southwest of section 12-19-8 near Mannford came in for an initial flow of 100 barrels from the Skinner sand and in shooting it the bottom of he casing was shot off. This well is two locations west of the discovery well of the new field there.

Pottawatomie Wildcat

Magnolia Petroleum Company's well in the southeast corner of the southwest of the northwest of section 18-7-5, near Maud in Pottawatomie County has plugged back from 3860 feet to the sand at 3590-3610 feet and the well is estimated to be making about six barrels per day. This well was being watched with much interest, it being of wildcat nature, opening up a new producing area for the deep pay of the county.

The Shaffer Oil and Refining Company's No. 2, in the northwest corner of the southeast of section 31-14-10, Creek County, southwest of 2 Beggs, found a hole full of water in the Wilcox sand from 3449 to 3451 feet. The lease on which this well is located is an offset to a producing lease of the Empire Companies.

A report prevalent in the city to the effect that the Mutual Oil Company's Wilcox sand test in section 25-20-9 at Keystone was flowing 15,000 barrels per day was found to be entirely unfounded, the well showing for 50 barrels in four feet of sand found at 2020 feet. The well found this production in the Burgess sand and is now drilling to the Wilcox.

Magnolia Petroleum Company No. 1 Underwood, in the northwest corner of the southwest of section 21-19-6, a half mile east of the Skinner sand pool east of Yale has 1200 feet of oil in the hole at one foot in the sand, which was topped at 3448 feet.

The 9-9 country near Wetumka has one of the best well yet to be found in this northern Hughes County pool. The Berry Petroleum Company No. 1 in section 3-9-9 is holding up good while the production is given as 3006 barrels per day.

At a time when the future of the Wetumka pool was not so encouraging, the Berry well came as a stimulant to the district and work is now going on in full force. Producers were not so optimistic a few weeks ago when the Cosden well in tthe souhwest corner of the northwest of section 3-9-9 and the Transcontinental Oil Company well in the same section came in for small producers. The Foster well in section 3-9-9 is making 15 per cent B. S. and water after starting out with a clean oil. Papoose Oil Company's No. 3 Alexander in section 4-9-9 has drilled into water. However, their No. 1 well on the same lease has always made water as has the discovery well of the field.

Russell County Well Flowing 30 Barrels Hour

Russell, Kansas, June 18.—The third well for the Russell County field came in Monday for an initial flow of thirty barrels per hour from a depth of 2948 feet. The well, which is owned by the Lucky Seven Oil Company, is the Oswald No. 1, in the southeast corner of the southwest of the southwest of section 8-12-15 west, a quarter of a mile west of the first two wells.

This is the first well in the new field which had enough gas pressure to make a natural flow, the other wells being placed on the pump immediately after their advent into producing circles.

The Valerius Oil Company found the sand at 2998 feet in its No. 1, Munsell, in the northwest corner of the northeast of section 17-12-15 west, offsetting the discovery well of the field to the south and at one foot in the sand, has a hole full of oil.

Average Daily Production for all U. S. Fields

Oklahoma

	Past Week	Prev. Week
Burbank	91,600	88,615
Bristow	56,300	56,180
Osage (outside Burbank)	51,790	51,380
Tonkawa	34,280	34,436
Cushing	25,420	25,395
Okmulgee	24,380	24,560
Stroud	24,380	22,059
Hewitt	20,190	20,000
Cromwell	21,800	18,861
Healdton	14,600	14,520
Duncan and Walters	9,635	9,600
Wewoka	8,260	8,647
Other Fields	79,000	78,860
Totals	461,635	453,113

Kansas

Greenwood	17,980	18,100
Eldorado	16,280	16,760
Elbing and Peabody	9,260	9,325
Fox-Bush	5,500	5,535
Augusta and Douglas	3,335	3,345
Blankenship	3,220	3,250
Florence and Covert	2,670	2,685
Leon and Weaver	1,000	1,050
Other Fields	14,720	14,845
Totals	73,965	74,895

Louisiana

Haynesville	18,840	19,095
Caddo	13,745	13,955
Homer	7,940	7,935
Bellevue	5,500	5,740
Vinton	5,600	5,490
Bull Bayou	4,950	5,175
Cotton Valley	4,215	1,010
Elm Grove	1,005	1,020
Evangeline	550	525
Edgerly	550	550
Sarepta	75	190
Anse Le Butte	25	15
Totals	62,995	60,700

California

Los Angeles, Calif., June 14.—The daily average production of the California fields the past week, compared with the previous week, with number of producing wells in several Los Angeles Basin fields, was about as follows:

	Last Week	Prod. Wells	Prev. Week
Long Beach	165,000	435	169,000
Santa Fe Springs	65,000	335	65,000
Huntington Beach	47,500	259	48,000
Torrance	58,000	316	59,000
Dominguez	9,000	8	8,000
Rosecrans	735	1	725
Others	286,215		275,925
Totals	631,450		625,650

Arkansas

	Past Week	Prev. Week
Smackover Heavy	99,850	113,175
Smackover Light	38,365	39,030
El Dorado	13,010	12,880
Stephens	2,285	2,410
Totals	153,510	167,495

Texas

NORTH CENTRAL

	Past Week	Prev. Week
Corsicana-Powell	97,755	98,505
Archer County	35,270	33,335
Mexia	29,425	24,375
Electra	20,940	21,375
Stephens County	21,230	20,725
Burkburnett	19,150	20,580
Desdemona-Gorman	8,045	7,970
Ranger-Eastland	7,700	7,620
Young County	4,570	4,570
Richland district	3,500	3,600
Moran-Schackelford County	3,900	4,190
Currie	2,900	3,500
K-M-A	2,490	2,590
Iowa Park	1,780	1,940
Mitchell County	1,355	1,200
Strawn-Palo Pinto County	820	955
Panhandle district	890	850
Brown County	545	520
Reagan County	400	400
Petrolia-Clay County	290	300
Coleman County	145	150
Thrall-Williamson County	70	70
Jack County	35	35
Scurry County	15	15
Totals	263,220	259,370

GULF COAST

	Past Week	Prev. Week
Hull	19,250	21,300
West Columbia	12,650	11,525
Goose Creek	11,200	11,100
Orange	10,850	10,330
Humble	8,400	8,400
Sour Lake	4,500	4,600
Batson	1,550	1,450
Saratoga	1,500	1,465
Damon Mound	1,450	1,555
Spindle Top	950	920
Blue Ridge	950	600
Markham	600	975
Pierce Junction	400	360
Richmond	250	190
Barbers Hill	180	190
Dayton	150	65
Nacogdoches	110	110
Hockley	20	20
High Island	15	15
Stratton Ridge	..	40
Big Hill	..	..
Totals	74,975	75,210
Total North Texas	263,220	259,370
Luling	30,000	30,000
Mirando	4,100	4,000
Somerset	2,500	2,500
Rockdale-Minerva	475	500
Totals for Texas	378,270	371,580

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is carried each week by The OIL WEEKLY, and shows daily production average for each state or section. Figures for Oklahoma, Kansas, Texas, Louisiana, Arkansas and Mountain States are compiled by The OIL WEEKLY, while estimates for California and Eastern States are furnished by the American Petroleum Institute.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	†Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyoming-Montana	Calif.	Ark.	U. S. Total
August	726,981	217,208	105,966	323,148	89,998	419,775	97,936	120,750	83,938	375,000	28,834	1,618,765
September	716,107	207,467	107,790	314,932	89,760	418,880	101,857	114,200	80,490	387,000	33,135	1,540,371
October	714,906	200,465	115,130	316,370	90,404	424,037	97,502	116,375	86,412	423,750	34,127	1,489,005
November	711,531	199,223	114,150	388,376	91,098	421,200	93,410	116,375	106,092	450,000	77,225	1,668,776
December	692,702	170,187	111,819	242,010	87,508	435,007	86,513	114,900	108,679	484,000	107,732	1,722,349
January (1923)	708,372	184,885	115,628	304,790	86,720	436,767	81,205	113,500	123,254	517,500	111,920	1,770,545
February	712,007	180,364	96,984	286,493	85,298	446,345	78,058	112,500	110,328	587,500	101, 346	1,805,496
March	720,287	184,582	89,873	283,355	86,012	449,693	75,352	109,900	118,580	653,000	108,630	1,888,522
April	756,381	192,148	97,320	293,780	86,133	478,100	76,854	106,000	127,860	711,250	102,099	1,983,026
May	793,774	203,776	90,905	304,032	85,500	504,498	75,368	109,125	125,680	700,125	109,033	2,010,840
June	824,297	217,162	92,240	320,250	85,255	521,880	72,745	110,300	129,559	773,000	103,592	2,159,818
July	866,665	274,330	91,795	378,335	84,785	508,405	70,085	113,000	137,300	851,000	132,395	2,275,305
August	826,982	278,574	94,398	393,780	82,741	464,416	68,739	112,625	137,909	866,250	123,000	2,251,956
September	830,517	371,730	93,649	443,461	77,078	421 763	68,935	108,400	157,742	857 700	127,955	2,269,176
October	876,059	408,036	84,920	511,483	71,362	371,657	65,305	107,750	139,912	823,125	125,145	2,240,741
November	935,975	479,383	82,747	580,700	69,337	387,253	64,701	108,125	151,225	768,275	124,188	2,253,806
December	729,591	283,130	78,033	378,478	68,444	378,017	61,138	110,300	146,770	723,845	120,049	1,987,041
January	685,540	243,120	75,085	334,485	67,815	374,605	59,125	108,000	144,735	698,965	114,255	1,900,945
February	729,933	254,180	81,131	362,849	68,183	407,568	59,449	104,500	141,775	675,425	114,726	1,934,476
March	762,684	284,874	78,567	388,221	69,864	407,946	55,783	97,800	128,352	650,790	119,869	1,917,023
April	777,590	276,595	76,755	380,005	71,015	429,980	54,740	101,250	127,700	649,825	128,750	1,943,270
May	763,320	267,475	74,175	374,915	71,490	424,355	60,655	103,800	127,770	640,930	148,630	1,952,515
June 7	787,378	259,370	75,210	371,580	74,895	453,113	60,700	106,000	127,800	625,650	167,495	1,987,233
June 14	898,820	263,220	74,975	378,270	73,965	461,635	62,995	106,000	126,650	631,450	153,510	1,994,475

*Includes North-Central Texas, Kansas, Oklahoma.
†Beginning February, 1923, Somerset, Mirando, Rockdale and Luling production included.
NOTE—Mexia production included in North Central Texas.

Imports of Petroleum at Principal United States Ports

The following represents the total imports of crude oil for the month with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	Total at All Ports
April	370,000	669,000	1,074,000	625,000	591,000	3,319,000	1,615,000	1,020,000	1,135,000	168,000	4,362,500	7,681,500
May	344,000	515,000	1,026,000	437,000	615,000	2,937,000	1,351,000	910,000	1,184,000	127,000	3,582,000	6,519,000
June	314,000	421,000	1,791,000	755,000	809,000	4,090,000	1,515,000	1,142,000	1,062,000	229,000	3,948,000	8,038,000
July	287,000	465,000	1,806,000	448,000	898,000	3,876,000	1,471,000	1,120,000	833,000	92,000	3,516,000	7,392,000
September	268,000	565,000	1,744,000	660,000	686,000	3,923,000	1,776,000	1,397,000	880,000	224,000	4,277,000	8,202,000
October	365,000	292,000	1,194,000	536,000	816,000	3,203,000	988,000	1,330,000	380,000	50,000	2,248,000	5,951,000
November	223,000	395,000	1,194,000	576,000	757,000	3,145,000	1,478,000	1,000,000	551,000	111,000	3,287,000	5,432,000
December	474,000	574,000	1,243,000	606,000	1,024,000	3,917,000	2,019,000	1,832,000	933,000	259,000	5,043,000	8,960,000
January	398,000	531,000	1,060,000	376,000	949,000	3,314,000	1,295,000	887,000	689,000	15,000	2,936,000	6,250,000
February	520,000	527,000	639,000	458,000	771,000	2,865,000	1,558,000	1,284,000	525,000	195,000	3,562,000	6,427,000
March	802,000	734,000	1,243,000	502,000	1,668,000	5,049,000	2,346,000	1,689,000	1,116,000	301,000	5,257,000	10,281,000
April	653,000	664,000	1,371,000	407,000	1,067,000	4,162,000	1,641,000	1,492,000	510,000	68,000	3,711,000	7,873,000
May	693,000	596,000	1,368,000	264,000	1,329,000	4,250,000	1,398,000	1,308,000	884,000	169,000	3,759,000	8,009,000
June 7	282,000	63,000	393,000	122,000	120,000	980,000	405,000	222,000	126,000	15,000	768,000	1,748,000

NOTE—Figures by American Petroleum Institute.

Receipts of California Oil at Atlantic Coast Ports

The following shows the receipts of California oil at Atlantic Coast ports by months with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	Total at all Ports
March	442,000	184,000	1,355,000	496,000	615,000	2,691,000	.....	.....	.....	.....	.....	2,691,000
April	105,000	256,000	2,456,000	502,000	320,000	3,639,000	.....	478,000	.....	.....	478,000	4,117,000
May	444,000	72,000	1,259,000	764,000	964,000	3,553,000	.....	300,000	53,000	.....	353,000	3,906,000
June	821,000	160,000	3,206,000	826,000	808,000	5,821,000	.....	664,000	.....	.....	664,000	6,485,000
July	443,000	75,000	2,068,000	741,000	699,000	4,080,000	.....	559,000	.....	.....	559,000	4,639,000
August	329,000	229,000	2,956,000	836,000	683,000	5,033,000	.....	970,000	70,000	.....	1,040,000	6,073,000
September	1,028,000	237,000	2,581,000	621,000	443,000	4,910,000	.....	703,000	.....	.....	703,000	5,613,000
October	779,000	224,000	2,503,000	779,000	429,000	4,714,000	.....	746,000	.....	.....	746,000	5,460,000
November	591,000	155,000	2,302,000	584,000	271,000	3,903,000	.....	935,000	.....	.....	935,000	4,838,000
December	454,000	215,000	2,901,000	813,000	753,000	5,136,000	.....	729,000	.....	.....	729,000	5,213,000
January	619,000	77,000	3,156,000	659,000	503,000	4,660,000	.....	615,000	.....	.....	615,000	5,275,000
February	326,000	145,000	2,811,000	842,000	75,000	4,199,000	.....	810,000	.....	.....	810,000	5,009,000
March	298,000	77,000	3,352,000	989,000	413,000	5,129,000	.....	.....	.....	.....	.....	5,129,000
April	170,000	77,000	2,633,000	378,000	224,000	3,482,000	.....	.....	.....	.....	.....	3,482,000
May	190,000	147,000	2,771,000	411,000	273,000	3,792,000	.....	315,000	.....	.....	315,000	4,107,000
June 7	.....	74,000	682,000	73,000	.....	829,000	.....	.....	.....	.....	.....	829,000

Note—Figures by American Petroleum Institute.

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A CROWN BLOCK BUILT FOR REAL SERVICE

"GULFCO" Products

Can now be had from stock at any of the following stores of the

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Gulf Coast Machine & Supply Company, Beaumont, Texas

Western Kentucky Operators Busy in Efforts to Open Up New Producing Areas

Louisville, Ky., June 20—Operators throughout the Kentucky regions are maintaining an active drilling campaign in close to fifty counties in the state, and while prices are not favorable, operators doing work in the more shallow sands feel that the small cost of wells justifies their being drilled, hence, the reason for the great number of completions.

Wildcatters are also hunting over a vast section of the state for new fields. Elliott Couny, a new one in the northeastern part of the state, comes to the fore with producers at a very shallow depth that will pay out in time. The Owensboro field is also attracting wide attention, as the Indiana Pipe Line Corporation's trunk line from the Bowling Green-Scottsville field, near the Tennessee line, to Lawrenceville, Illinois, runs through the Owensboro district. Some 20 strings of tools are pounding away in that field.

Allen County, the most active in new work at this time, was hit pretty hard during the week with a large percentage of dry holes.

Warren, Barren, Simpson, Allen Cumberland, Hancock, Ohio, Hopkins, Metcalf, Monroe, and several other Western Kentucky counties are showing good production. Green County also in the western division, is being given a most thorough testing by the New Domain Oil and Gas Company, having brought in three wells during the week, one being dry and the other two each good for a million cubic feet of gas daily.

The finding of big production in Cumberland County below the well known Sunnybrook sands and still further down below the Pencil Cave formation, is bound to revolutionize the county into one of the most productive in the state. Two big wells on the Kerr farm, owned by the McClintock Oil Company, found this deep sand and started at 150 and 1500 barrels. West of Glasgow, in Barren County, the Emery Moore pool, is attracting wide attention and the oil is of the highest gravity found in the state. Wells in the field all equipped and put on the pump cost around $1,500, and the pay sand is found from a very shallow depth to 550 feet. The gravity ranges from 41 to 46.

Several spots in Eastern Kentucky are most attractive, especially the Weir sand fields of Johnson-Lawrence-Magoffin Counties, the oil being found at depth from 700 to 1100 feet. This oil is of the Pennsylvania grade, but only brings the Somerset Light price on account of the cost of moving through pipe lines. The Union Gas and Oil Company has during the past seven years drilled close to 515 wells on its vast holdings of something like 20,000 acres, along the Lawrence-Johnson County line, and in what is known as the North Weir field. In the South Weir field located in the area along the west line of Johnson County and east line of Magoffin County, is another very interesting spot. R. G. Gillespie is doing a mint of development work in that area, as are the Atlantic Oil Producing Company and numerous of the other large operating concerns. Along the line of Lee and Owsley Counties, in the central portion of the state, in what is known as the Idamay field, there are close to 25 strings of tools working and more coming in daily. The new field was recently opened by the Petroleum Exploration Company and is now being connected to a pipe line by a subsidiary of the Petroleum Exploration Company.

Western Kentucky oil is handled to a large extent by the Indiana Pipe Line Corporation, and the Paragon Development Company, while the eastern and central part of the state is covered by the Cumberland Pipe Line Company.

Eastern Fields Show Many Completions in All Areas

Pittsburgh, Pa., June 20.—Light pumpers in most all fields east of the Mississippi during the past several days were the rule, although some of the fields came to the front with exceptionally fine producers. The real well of the week was found in the new northern addition to the North Western Ohio, or Trenton Limestone field, in the pool recently opened near the hamlet of Payne, in Paulding County. This new well was drilled by the Washington C. H. Oil Company, on the Ryal lease, and at a depth of 1451 feet made better than 300 barrels. The well will bring about a great deal of new development work in the county.

In Van Wert County, adjoining Paulding on the south, a wildcat well drilled by McClure, Stelzer and Company, on the Foor lease, showed 80 barrels from the Trenton lime.

In the Centralia field, in Marion County, Illinois, a couple of wells were found in territory that has been looked upon formerly as drained. One showed 75 and the other 50 barrels, from a sand close around 775 feet.

Indiana reported only a 10 barrel pumper found in the Princeton field, in Gibson County, south of Vincennes, and southwest of the old Illinois field.

Many new locations for wells have been staked out in the Central Ohio gas belt, and every test put down is a double-barrel proposition, as oil is just as liable to be found as is natural gas. At the same time dry holes are in vogue in the hunt for the two products in both the shallow and deep sands found in that field.

Another 30 barrel oil well has been added to the Wayne County field, in a wildcat drilled by Harmon and Company on the Haas lease, in Cannan township. Eastern Ohio, experienced a rather light week in development work.

West Virginia's best completion was a 50 barrel well found by the Philadelphia Oil Company in a second test on the T. J. Smith lease, in West Union district, Doddridge County. However the most important find recorded in the state for the week was the findi[illegible] of a 20 barrel producer in the Hen[illegible] district of Clay County. The well [illegible] located five miles in advance of production and gives the intervening leaseholders something worth while to develop.

Old sturdy Pennsylvania still maintains its activity, especially in the Bradford area, where the small wells are coming in with great regularity and every producer, whether small or above normal, adds much income to properties where drilling is being done.

Out of seven new competions, the Allegany county field, of New York shows six producers and one dry hole. All sections of Kentucky are becoming more active than for any period since along in 1920, and the state bids fair to be one of the most important east of the Mid-Continent fields.

The week in review shows a total of 187 wells completed, of which 32 were dry holes, 30 were gas wells, with a combined volume of 42,250,000 cubic feet, and 125 oil wells, with a flush of 1,499 barrels. The heaviest production for the week's period came from Northwestern Ohio and Kentucky.

Oil Commission Drafting Final Detailed Report

Washington, D. C., June 18.—The presidential oil commission, which has made a preliminary report to President Coolidge, is now engaged in drafting its final report. The commission, headed by Dr. George Otis Smith of the United States geological survey, has made a survey of the government's oil reserves and is now engaged in exchanging views as to what the government should do in the way of assuring a permanent conservation of a national oil supply.

The preliminary report made to President Coolidge was designed, it is understood, to serve as a guide for what the president may expect later in the way of further recommendations.

Those in touch with the commission's work indicate that it was now planning to take up each one of the naval reserves and along the lines of the tentative report now in the hands of the president a new government oil policy will be mapped out. It was explained that the reason the president had not made public the tentative findings of the commission was simply that the commission had not actually completed its work.

It is understood that it will be some time before the commission will be able to make its final report. Considerable data has been collected upon the oil situation and this is now being studied with a view of suggesting a new policy, which is expected to serve as the last word in the conservation of the American oil reserves.

Petroleum Division for A. S. M. E.

Cleveland, Ohio, June 14.—A petroleum division of the American Society of Mechanical Engineers was authorized at the annual spring meeting of the organization held here recently. Formation of the new division is now under way.

Drilling Crew Leaves For Canadian North to Determine Possibilities of Discovery Well

Calgary, Alta., June 16.—Probably the outstanding feature of recent developments was the departure for the Fort Norman fields of a drilling crew of seven men in charge of Angus Sutherland, who will continue work for Imperial Oil, Ltd., in the far North. Full details of the Imperial plans have not been announced; but it is expected the crew will reach Fort Norman on the first northbound steamer, about July 1. Drilling equipment is on the ground, and the first work undertaken will be the deepening of No. 1 discovery well to determine the full productiveness of the underlying structure. This may require the entire season, but if results are secured before the season closes additional drilling may be undertaken.

The Irma-Wainwright field is still the center of real activity in Alberta. British Petroleums No. 3, section 29-45-6w4 is apparently to get really under way, spudding in late last week on section 29-45-6w4. British Petroleums No. 4, at a little distance from No. 3, is expected to spud in around June 20. The derrick and camp are completed, and gas lines have been laid and water tanks set up. Nothing has been done yet toward getting No. 2, section 30-46-6w4 into production, except the erection of an oil tank. Maple Leaf Oil Company, section 24-45-8w4, is rigged up, and should spud in early this week; D. O. Credille has arrived from Texas to take charge of the work.

On section 20-45-6w4 the Western Consolidated Oil Company of Calgary has all its machinery on the ground and is rigging up. Wainwright Oil Producers Syndicate, section 36-44-7w4, has moved a drilling outfit from Lundbreck to the location, and is now rigging up. Both these tests should be drilling some time in June. So far, no other real new work seems to have been started, though other companies have made tentative locations and there is talk of drilling outfits being brought in. On section 29-45-9w4 the Irma Oil Development Company test, started last season, is being continued.

West of Wetaskiwin the Mutual Oil and Gas Company test at the northeast end of Pigeon Lake, section 14-47-27w4, will be finished by the Globe Drilling Company of Edmonton. The latter, in some respects a reorganization of the Mutual venture, appears to have secured substantial backing. The Mutual test was originally started in a "mud volcano" arear in the expectation that oil would be struck within 1100 feet on a small local structure. Some gas was encountered, but no oil; and last fall drilling was discontinued at 1200 feet. The Globe Drilling Company has already resumed work here, and is also planning to drill a second test in the Irma-Wainwright field, between the British Petroleums wells and Fabyan.

Southern Alberta operators seem to hang fire. The Canadian Oil and Refining Company Rogers-Imperial gasser, section 29-1-11w4, has increased its production to 65,000,000 cubic feet a day with 945 pounds pressure, but so far no decision has been made as to how this enormous production will be utilized. There is talk of a pipe line to connect with the new Canadian Western Natural Gas Company line at Foremost, and also of piping the gas to Great Falls, Mont., though a provincial prohibition of the export of gas stands in the way of the latter project. On the Quarantine Reserve, township 1-15w4, nothing definite has been done toward resuming work on any of the unfinished tests, though it is generally expected that the Australian syndicate, which has been nibbling at the proposition, will go ahead with a conclusive test of this area.

In Ontario the High Pressure Oil and Gas Company deep test of the Trenton limestone near Arkona, in Lambton County, looks like a failure; it is pretty well through the Trenton without securing any production and will likely be abandoned this month. In Essex County, however, the Southern Ontaria Gas Company is going ahead with its deep test between Harrow and Arner; and in Kent County Eugene Coste & Co. are going to drill another deep test.

In Essex County B. Jasperson has finished No. 5 gasser on the Lake Shore at Kingsville with 25,000 cubic feet a day or better; and has started No. 6 near the Pere Marquette station. All five wells drilled in this area secured production, though the individual wells are small. In Kent County, E. P. Rowe, drilling for gas in Zone township north of Thamesville, has run into a fishing job at 1700 feet.

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GOOD PEOPLE TO DO BUSINESS WITH

Pelican Well Tool & Supply Co.

General Offices: Shreveport, La.

Three Oil Wells and One Gasser Completed In Cotton Valley During Week; More Due

Shreveport, La., June 16.—The Cotton Valley boom hung fire for a long time, but there was plenty of excitement there last week. Four wells were completed, of which two were of gusher calibre; and oil, gas and salt water were present in just about the right proportions to make the tests interesting.

The Gulf Refining Company's No. 1 Hodges, in the southeast corner of the southeast quarter of the southwest quarter of section 11-21-10, probably is the biggest well of the batch, as it has flowed for short periods at the rate of more than 11,000 barrels of fluid, mostly oil, per day. However, it sands up often, and its real value still remains uncertain, as it might possibly go dead or go to water, as did the Ohio Oil Company's Hodges 3, completed about three weeks ago. This is not considered likely, though, as, after having been cleaned out with a sand pump, it flowed steadily in gusher style for one period of more than 24 hours which began on Friday afternoon.

It has made a total of about 12,000 barrels of oil and 3000 barrels of salt water since it came in on Tuesday. As this is written, it has been dead since sundown yesterday, and, the rotary rig having been torn down, it is said that a string of cable tools will be moved in to clean it out. It made a great deal of sand while flowing, and it is not surprising that it should sand up so often. It was finished in eight feet of sand at a total depth of 2561 feet, topped about eight feet higher than in the Ohio's Hodges 3, mentioned above.

The Ohio Oil Company's No. 2 Merritt, offsetting the Gulf's well on the southeast, rivals the Gulf's well in that, while it does not flow so big, it certainly is a more consistent producer. It came in on Wednesday, and was first judged as a 4000-barrel well from seven feet of sand at a total depth of 2539 feet. It also made a great deal of sand while flowing open, and salt water in the proportion of about 8 or 10 per cent soon appeared. It is now choked in to a daily production of around 2000 barrels of fluid, 2 per cent water and 6 per cent b. s.

Only one of the three oil wells completed last week makes no water at all, the Humble Oil and Refining Company's No. 2 Babb, located in section 14, offsetting production. It came in with an initial production estimated at 800 barrels of pipe line oil and 12,000,000 cubic feet of gas from 26 feet of sand at 2539-65 feet. It is now choked in, and is making around 500 barrels of clean oil per day through a 1½-inch opening.

The Humble Oil and Refining Company's No. 1 Bodcau Lumber Company, located in the northwest corner of the southwest quarter of section 14, was bailed in on Friday the 13th as a 30,000,000 cubic foot gasser, making only a very slight spray of oil, from 33 feet of sand at a total depth of 2527 feet. Today's reports credit it with a spray of from 5 to 10 barrels of oil per day, and it is considered likely that it may blow itself in as an oil well, as did one of the producing wells offsetting it.

The Invincible Oil Company, probably forewarned by the flooding of the Ohio Oil Company's No. 3 Hodges, an indirect offset, is drilling in slowly and cautiously in its No. 1 Hodges, located in the southwest corner of section 11-21-10. It already has been bailed dry twice, once at 2545 feet, and again at 2551 feet, and liner has been pulled a third time for deeper drilling. The last dry test was made at a structural level five feet lower than the top of the sand in the Ohio's Hodges 3, and approximately two feet higher than the bottom of he hole in that well, according to the best data available.

The last string of casing has been set in four more very important tests, tabulated below, which may be completed this week. All but one, the Fortuna's well, are located remote from production, and that one is important because of its proximity to what may prove to be the northwestern boundary of the field. These four wells are:

Oil Fields Gas Company Hope A-1, 13-21-10, NWc section; casing seat 2547 feet; Hope B-2, 24-21-10, SEc NW¼ NW¼, casing seat 2447 feet.

Fortuna Oil Company Merritt 1, 14-21-10, NWc section, casing seat 2466 feet.

Humble Oil and Refining Company Hodges 1, 12-21-10, NEc W½ SW¼, casing seat 2472 feet.

Another very important test now drilling is the Ohio Oil Company's Crichton 1, located in the northeast corner of the southeast quarter of section 21-21-10, more than a mile and a half southwest of the nearest production. Ten-inch casing has been set at 1138 feet. The Standard is rigging up on an offset to it.

The Standard Oil Company on Saturday morning posted a price of $1 per barrel on Cotton Valley crude. Latest reports indicate that its line into the field may be completed during the current week.

Louisiana Would Prevent Oil Pollution of Streams

Shreveport, La., June 14.—Hoping to prevent the pollution of streams by waste from oil fields, the Louisiana legislature has before it a law making it unlawful for any company to allow waste to flow into streams. The text of the law is substantially as follows:

No person, firm or corporation shall willfully or negligently pump, discharge, deposit, throw or spill, or cause to be pumped, discharged, deposited, thrown or spilled into or on the waters of any lake, bayou, river, creek, brook, pond, canal, or any other streams or bodies of waters within the jurisdiction of the state of Louisiana, within three miles of the shore. No crude petroleum or its products or any other inflammable oil or any bilge water or water from any receptacle containing any of said substance shall be emptied by boat, barge, ship, steamer or any other vessel or floating craft of any kind whatsoever or from any pier, wharf, dock, factory, mill, manufacturing establishment, oil plant or oil station, into the water.

No person, firm or corporation having charge of any pier, wharf, dock, platform, oil station or other establishment where crude petroleum or any of its products, or other inflammable oils are kept, stored, used or handled, shall keep such pier, wharf, dock, platform, oil station, or other establishment and the piling connected therewith, above the lower water line, free and clear from the accumulations of any waste that may come from such substance. Penalties or fine not to exceed $1500, nor more than one year's imprisonment, or both, are prescribed.

Another bill is proposed providing for the protection and conservation of the supply of natural gas in the state of Louisiana.

This bill prohibits the waste and wasteful use of natural gas through the burning or consumption thereof for the manufacture or production of carbon or other resulting products therefrom. Te bill also prohibits the taking, using, sale or other disposition of natural gas from gas wells for such purposes, and provides penalties for violation of the act.

Smackover Production Shows Sharp Decline

El Dorado, Ark., June 16.—A 6000-barrel gusher was completed last week by the Unity Petroleum Company, discoverer of the Norphlet extension, in section 24-16-16, Union County. It is making clean pipe line oil from 10 feet of sand at a total depth of 2010 feet. The well is located about a half mile south of the well, which opened up the extension, and other wells surrounding. In effect, although some very small older wells are located still farther south of it, it extends the proven area almost a half mile farther south.

Smackover production averages declined sharply last week. Heavy oil dropped from 113,175 barrels the week before to less than 100,000 barrels last week. Light oil production also declined from 39,030 to 38,365 barrels.

A cut of 15 cents per barrel on all grades of Smackover crudes was posted by the Standard Oil Company of Louisiana, and promptly met by other purchasers, as of 7 a.m. June 10.

The Humble Oil and Refining Company tested salt water, with a showing of oil and gas, at 2543 feet in its No. 1 Cordell, located in section 1-18-14, Union County. It is said that the 8-inch casing is to be pulled, and that a deep test is to be made in this hole.

The Markle Syndicate is preparing to set a string of 6-inch casing for the purpose of testing six feet of sand at a total depth of 2260 feet in its Plummer wildcat, in section 22-9-10, of Cleveland County.

Peltier et al are drilling at 2285 feet in their No. 2 Eagle Mills, in section 25-13-16, Ouachita County.

Third Sand at Wheeler Ridge Is Producing

Standard completes ninth producer for field for 400 barrels of 31 gravity at 400 feet

By W. E. Green

Los Angeles, Calif., June 14.—The Standard Oil Company came to the rescue of those looking for something out of the ordinary this week by completing its No. 9 at Wheeler Ridge for 400 barrels of 31 gravity oil at 4001 feet, more than a thousand feet deeper than the previous deepest hole in the field, thus proving the existence of a new and third sand.

Until the completion of the new well there were only nine producers in the field, ranging in depth from 1800 to 2800 feet and making a daily average production of less than 100 barrels per well. Wheeler Ridge is in Kern Connty and the higher gravity of the oil produced by the new well is more than encouraging, since the Kern County production is below 30 gravity.

Most of the proven acreage at Wheeler Ridge is held by the Standard Oil Company and the General Petroleum Corporation. At this time the General Petroleum has two producers and the Standard has eight. Recently the Standard Oil completed No. 10 for 50 barrels at 2850 feet. McAdoo Oil Company is drilling a well that offsets Standard's No. 9 and is now drilling slightly below 3200 feet.

Long Beach Declining

Notwithstanding the completion of 12 wells at Long Beach the past week, with a total flush production of more than 6000 barrels, the daily average production of the field shows a decline of 4000 barrels. Santa Fe Springs held its own at 65,000 barrels, but Huntington Beach dropped 500 barrels a day. Torrance dropped 1000 barrels a day average. Dominguez was up 1000 barrels daily on account of the Shell's new producer on the Reyes.

Torrance Slowing Down

The activity at Torrance is slowing down to some extent. Only 65 wells are now drilling below 3000 feet with a total of close to 100 wells drilling in the field. In the old Redondo section of the field the Standard drilled its Felker 1 to 5176 feet for a deep test, but found nothing and the past week pluggd it back to 3678 feet for a 50-barrel pumper. There is little hopes now for a deeper sand in the district near Redando.

Deep Sand at Dominguez

The Shell Company at Dominguez found a sand at 5200 feet in its Hellman 1, more than a 1000 feet deeper than found in the Union's Hellman 1. Some think this a deeper sand, while others incline to the opinion that there is a sharp dip between the Union's Hellman and the Shell's Hellman. Shell's deep hole is to the west of Union's Hellman, only 600 feet away. Six hundred feet is called an offset at Dominguez. For this reason the Shell test is being watched with much interest.

Sixteen Drilling at Rosecrans

Sixteen wells are now drilling in the Rosecrans area, the new field to the west and northwest of the Dominguez field. Reports late in the week were that Superior Oil Company's Maxwell 1, close to one-fourth of a mile southeast of Union's Rosecrans 1, which was first to prove presence of oil in the Rosecrans field, had found an oil sand at 4128 feet, some 200 feet deeper than in Rosecrans well. Oil is said to be present in the ditch, but Superior officials are very slow in giving out any information. If this well is completed as a producer, wells now being drilled by the Barnsdall, Union and Associated to the east of Harbor Boulevard will be looked upon with more favor.

It will probably be another 90 days before trend of production at Rosecrans can be determined. Some of the companies are playing the hunch that the main production is to be found to the north of Rosecrans well and north and northwest of Union's Athens 1, which is the only producer in the field at this time. The Athens

California Oil Administration Does Big Work During Past Year at Very Low Cost

San Francisco, Calif., June 14.—According to estimates prepared by the state mineralogist in conjunction with the state board of control, on the first of March of this year, the estimated cost of maintaining the department of petroleum and gas of the state mining bureau for the current fiscal year is $135,917.17. Therefore in order to renew the petroleum and gas fund to the maximum of $185,000 allowable by the statute under which the department functions, oil and gas producers and oil land owners will be subjected to a tax, prorated against oil and gas produced during 1923 and proved oil land as of March 1, 1924, to bring in a total amount of $135,917.17.

In prorating the assessment one-tenth of $135,917.17. is assessed against the proved oil land of the state, as determined by the state oil and gas supervisor. The remaining nine-tenths is levied against the oil produced and the gas produced and sold, as determined from sworn statements of oil and gas producers. For the purposes of assessment ten thousand cubic feet of gas is considered equal to one barrel of oil.

The total proved oil land of the state is 116,868 acres. Of this amount 19,933 acres, being owned by federal, state and city governments, or for other reasons, is not assessable. The remainder, 96,935 acres, is assessable, and the rate per acre is $.14021, to yield a total of $13,591.71.

The total production of net oil in 1923 according to sworn statements is 259,882,565 barrels, an increase of 123,559,114 over 1922. The total quantity of gas produced and sold is 115,680,200,000 cubic feet. The rate per barrel of oil and per ten thousand cubic feet of gas is $.00045063, slightly over 45 hundredths of one mill per unit, to yield a total of $122,325.46.

The following table gives the quantities of proved oil land, oil, gas and number of producing wells in varoius counties of the state:

County—	Total Proved Land (acres)	Assessable Proved Land (acres)	OIL (bbls.)	GAS (10 M. Cu. Ft.)	WELLS (No.)
Fresno	14,600	14,422	5,038,285	536	883
Kern	72,371	54,473	44,949,852	2,301,911	5,817
Los Angeles	8,558	7,187	157,019,690	7,552,068	1,458
Orange	7,242	6,756	46,269,288	1,543,645	915
Ventura	3,942	3,942	3,583,737	128,425	516
Santa Barbara	9,303	9,303	2,973,905	41,435	387
San Luis Obispo	772	772	32,989	.....	18
Santa Clara	80	80	14,430	.....	12
San Mateo	.....	.....	389	.....	4
Total	116,868	96,935	259,882,565	11,568,020	10,010
			Rate per bbl. of oil	Rate per 10M ft. of gas	
Rate		.14021	$.00045063	$.00045063	

The production from Fresno, Kern and Santa Barbara counties for 1923 shows a decrease of 11,650,857 barrels over 1922, due partly to natural decline, but largely to the curtailment of drilling and production in the San Joaquin Valley and northerly Coastal fields caused by excess production of Los Angeles and Orange counties. The oil production of Los Angeles and Orange counties increased from 68,734,238 barrels in 1922 to 203,288,978 barrels in 1923; the gas production increased from 23,496,200,000 cubic feet in 1922 to 90,957,130,000 cubic feet in 1923.

producer is about one mile north of Rosecrans 1.

Howard Townsite Leases

Howard townsite lies to the west and slightly northwest of Athens producer and there is a scramble for leases on the lots in the townsite. Getty and United Oil Company are getting most of the lots with some ten or twelve other companies and individuals leasing small tracts. Attempts are being made to block up lots into community leases, but many single lots are being leased.

Other subdivisions are located to the north and west of the Athens producer, and if the production lies in that direction a town lot drilling campaign can not be prevented, regardless of the good intentions now being expressed by those securing the leases.

High Quality Crude Oil From Slick Sand

Bartlesville, Okla., June 16.—Examination of a sample of crude petroleum from the so-called Slick sand in the Tonkawa field of Oklahoma, made by department of the interior chemists at the Bartlesville, Oklahoma, experiment station of the Bureau Mines, discloses that the oil is of a very high quality, being practically equal in every respect to the oils from the shallower sands in the Tonkawa field. The well from which the sample was taken is No. 1-A, completed by T. B. Slick on April 10. The sand from which this well is producing was found about 1500 feet below the Tonkawa sand, which up to that time had been deepest producing sand in this fild. The importance of this discovery is indicated by the fact that at the present time a large number of wells are being drilled to produce from this sand. Tonkawa has been producing a large percentage of the light crude in Oklahoma for the past year. On April 23, when the sample was taken, the well was averaging about 2700 barrels per day. The analysis is as follows:

Viscosity, 34 Seconds Saybolt at 100° F.

Gravity of crude 41.9° A. P. I.

Sulphur 0.16%.

Gasoline and naphtha 40.8%, 58.9° A. P. I.

Kerosene distillate 11.8%, 42.8° A. P. I.

Gas oil, 16.8%, 35.8° A. P. I.

Non-viscous lubricating distillate 11.0%, 32.0-27.5° A. P. I.

Medium lubricating distillate, 4.8% 27.5-24.7° A. P. I.

Another interesting sample of crude has been recently examined by the Bureau of Mines. This sample is from the deep sand (4123 feet) in the Watchorn field, Pawnee County, Oklahoma, T 23N, R3E. The analysis is as follows:

Viscosity, 35 Seconds Saybolt at 100° F.

Gravity of crude 40.4° A. P. I.

Sulphur, 0.16%.

Gasoline and naphtha 40.4%, 58.4° A. P. I.

Kerosene distillate, 12.9%, 41.5° A. P. I.

Gas oil, 15.5%, 34.° A. P. I.

Non-viscous lubricating distillate 10.3%, 31.7-27.1° A. P. I.

Medium lubricating distillate, 6.0%, 27.1-25.4° A. P. I.

The lubricating distillates in both these crudes are apparently fairly high in wax and the general nature of the crudes indicates that steam cylinder stock can probably be successfully made from these oils.

GROSS
WATER CONTENT
BBLS. NET OIL RECOVERED
GRAVITY
POSTED PRICE
UNTREATED CRUDE: 1000 BBLS.
30.%
700
21.5° BE
$1.02
THE SAME CRUDE WHEN TREATED:
.5%
850
27° BE
$1.16
25.5%
REDUCTION
150
BBLS. INCREASE
5.5
GAIN
14
INCREASE
A
SIMPLE PROBLEM
in MATHEMATICS
by the
OFFICIAL
OIL DOCTORS
PROBLEM: If your crude production tests 21.5° gravity Beaume, with a water content of 30%, the posted price of which is $1.02 per barrel at the well, what will be the result of treating each thousand barrels of this crude by the "PR" Electric Dehydration Process?
ANSWER: Treatment by the "PR" Electrical Dehydration Process will recover 150 barrels of additional oil; the water or emulsion content will be reduced to possibly less than 1%; the gravity of the entire 1,000 barrels will be increased five and one-half degrees to 27° Beaume; the posted price on the above basis being $1.16 per barrel at the well.
Figure it out in dollars and cents yourself, Mr. Producer. Take the daily net production of your well, or lease; add to it the net oil recovered; then multiply by the difference between the price of the crude production and the treated net oil; and you have your daily profit in dollars and cents.
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CALIFORNIA FIELD OPERATIONS

The following table from statistics compiled by State Oil and Gas Supervisor R. D. Bush for California for the past several weeks gives a true insight into field activities:

Month of—	New wells started	Water shutoff tests	Deepening jobs	No. wells aband.
*June	120	195	59	22
July	94	145	46	23
*August	96	141	41	26
September	122	194	39	36
October	134	131	38	25
November	100	151	48	23
*December	105	181	37	32
January	120	111	46	23
February	125	97	49	47
*March	142	183	81	99
Week ending—				
April 5	28	43	20	7
April 12	32	37	17	14
April 19	38	39	16	6
April 26	32	35	23	7
May 3	30	38	14	4
May 10	31	47	20	8
May 17	26	28	16	8
May 24	49	27	20	9
May 31	20	31	9	5
June 7	34	37	16	5

*Denotes months with five weeks.

Lake Richland Field Potentialities Growing

Use of air on wells in Corsicana-Powell field becoming unprofitable as sands are depleted

By H. H. King

Corsicana, Texas, June 17.—Slight extensions were made to the productive limits of the Lake Richland pool during the past week, and five new completions added gives the field a potential production in excess of 5000 barrels daily. The bulk of this oil is going into storage of The Texas Pipe Line Company for the account of the producer, as The Texas Company limited its purchases in the pool some few weeks ago, while the Prairie Pipe Line Company, which is the only other purchaser in the field, is confining its runs to leases owned by Col. A. E. Humphreys and the Oxford Oil Company. Drilling activity in the pool has registered a steady increase during the past four weeks, and the completion of new wells is followed by more locations.

The most important extension given the Lake Richland pool during the past week is the Sun Oil Company's W. Pat Brown 4, which widened the field two locations to the west, with an estimated production of 500 barrels of pipe line oil at total depth of 2950 feet. This well was flowing by heads early this week while standardizing to pump, and will not be drilled into the usual depth of the Woodbine sand pay until a market for the production is available. That the field does not extend any great distance further west than this new well of the Sun Oil Company, is indicated by the dry hole completed last week by G. T. Moore et al's A. Hilburn 1, which is shut down in chalk below 3000 feet. The Sun Oil Company's Brown 2, which was completed June 3 with an initial flow of 115 barrels per hour at 2955 feet and reported last week making 700 barrels oil and considerable water, is now flowing about 900 barrels of oil with an additional 15 per cent water.

The field was extended one location to the southwest last week when the Oxford Oil Company's R. R. Davis 1 made about 200 barrels from the regular Woodbine sand at 2965 feet, and pipe line connections were made by the Prairie. In the proven area, the Godley Oil Company's A. A. Allison 3 is flowing about 800 barrels from Woodbine sand from 2938-75 feet, while a south offset completed by the Boyd Oil Company proved good for 500 barrels initial production at 2973 feet. The Providence Petroleum Company's H. A. Swink 2 has been completed making about 200 barrels at 2984 feet. The Halmack Oil Company's J. R. Webb 1 is reported good for 300 barrels on the pump at 2958 feet. The field appears to have been defined to the north of the discovery well, as Smith-Vaughan and others' S. T. Green 1 has been shut down as dry at 2980 feet, while Moore-Hamil Bros. et al's A. N. Brown 1 is shut down at 2940 feet. A short distance further north, Eslick et al's C. Moran 1 is drilling below 2910 feet, and McDonald-Graves et al's C. M. Graves 1 is reported to have tested salt water at 3040 feet. McDonald Brothers and Longley's S. T. Green 1 is also proving dry after drilling to 3170 feet.

The use of air to flow wells artificially in the Corsicana-Powell field accounted for 19,680 barrels of the 97,150 barrels daily production reported for the field Saturday. There are now 32 wells on air in the field, and Saturday were averaging about 615 barrels of oil per well, besides a large quantity of water. The number of wells on air is being gradually reduced as the oil production declines to a level making it unprofitable to keep air compressors operating, and only eight air wells in the field are averaging better than 1000 barrels daily, while 12 are doing less than 200 barrels daily, indicating that in all probabilities it will be necessary to take most of the latter ones off air shortly. The Hill tank farm section of the field, which proved to be an unusual prolific area when first drilled up and the wells placed on air, now has only 11 wells on air with a combined daily production of about 4050 barrels of oil.

Expect Organized Action in North Texas Unless Operators Make Individual Moves to Curtail

Wichita Falls, Tex., June 17.—Wichita and Archer County operators are slow in heeding the warnings sounded by the various crude purchasing agencies that a general curtailment of drilling activity will be necessary to maintain the present crude price schedules paid by the principal purchasers, and the slight reductions in field operations reported from these two counties lately has been largely confined to areas put under pressure by the pipe line companies in refusing to buy the oil when produced. The general shutdown agreement made by the operators last week in the upper part of the Mid-Continent district, where new production is contributing to a weaker crude market, has not spread to the North Texas district as yet, but unless the Wichita and Archer County operators voluntarily curtail their drilling shortly it is expected that an organized effort will be attempted to bring relief to the situation before it is too late.

Archer County added a new high gravity oil producing area this past week by the completion of the Texas Company's wildcat test on the Pease Estate (Graham), which swabbed 60 barrels in less than four hours from sand at 1438 to 1441 feet. It is located on the north bank of the Little Wichita River in the S. W. Schnell survey, abstract 386, and about three miles southeast from the nearest production, which is the Sunshine pool. The well is estimated good for 300 barrels daily, and has been shut in for storage. It was drilled largely on the strength of showings made by other tests drilled early this year to the northeast without finding enough sand to make a commercial well.

After having shown a decline in pipe line runs for the past two weeks, Archer County's runs rallied for a big gain during the past seven day period, with a daily average of 35,270 barrels as compared with 33,335 barrels for the previous week. This gain is largely due to increased runs made by the Prairie Pipe Line Company, which averaged about 2,825 barrels daily last week, while the Texhoma Oil & Refining Company has just begun operating its new line to the Swastika district, having averaged close to 900 barrels daily last week. The Wichita Pipe Line Company, which is owned and controlled by Wichita County independent refiners, has not built up any appreciable amount of tonnage from the Archer County pools by reason of its owners not desiring any additional crude, and last week handled less than 350 barrels daily from Archer County.

Archer County's field reports on June 14 show a total of 150 operations underway in the county, of which 90 are in process of completion or drilling; 21 rigs and derricks; only six locations; and 33 tests shut down for various causes. On the same date Wichita County reported 113 operations, of which 71 tests were actively underway; 20 rigs and derricks; eight locations; and 14 tests shut down.

Shallow oil sands in the south half of Stephens County added three new oil wells during the past week, with the largest completion coming from the Mahlstedt Mook Oil Co.'s Bruce 3, which did 130 barrels of oil after drilling sand from 2095 to 2120 feet. Empire Gas & Fuel Company's Wallace 7 is pumping 30 barrels from sand at 1794-1820 feet, while a 35 barrel pumper was completed from the Quakins Petroleum Company's Harmon 9 at 2085 feet. A 10,000,000 cubic foot gasser was brought in early this week northeast of Breckenridge when the Scott & Bateman interests' Davis 1 drilled the lime pay from 3005 to 3160 feet.

V. H. Smith, general manager of the Lion Oil and Refining Company, Kansas City and El Dorado, Arkansas, was a visitor in Houston during the past week. C. R. Wagner, superintendent of the Lion's refining operations at El Dorado accompanied Mr. Smith.

Coastal Fields Decrease in Completions And in Production During Past Week

Houston, Texas, June 21.—For the first time in many months, Batson leads in the number of completions reported from coastal districts. Five wells were completed at Batson during the past week, of which number four were producers, with a combined initial production of 65 barrels.

At the present time only three outfits are in operation in the Batson field: Ada Belle Oil Company's Paraffin No. 74 is setting screen at 490 feet; East Batson Oil Company's Allen 6 is standing, and the Sun Company's Paraffin No. 72 is setting screen at 910 feet. The field has not been active to any extent this year. Completions have not averaged more than one a week since May 1.

Initial production from 10 producers amounted to only 772 barrels for the past week as compard with an initial production of approximately 4000 barrels last week. Production for all fields is reported at 74,975 barrels for the past eight days as compared with 75,210 barrels for the previous week.

Hull, Goose Creek and Orange, the three fields where drilling activity is being concentrated, each show a decrease as compared with previous weeks.

The Republic Production Company got a 350-barrel well in Dolbear 52, a workover, at 2975 feet, and Dolbear 82 made 100 barrels when put on the beam at 1975 feet. Both wells are at Hull.

Goose Creek showed one workover, B. Smith No. 9 of the Sun Company making 75 barrels at 2500 feet. The Gulf Company brought in Wright 5 for 20 barrels at 2875 feet. Simms Smith No. 57 was abandond by the Humble Company at 2725 feet.

Orange reported one producer good for 137 barrels in the Gulf Coast Oil Corporation's No. 5 Leon, at 3175 feet. Kishi Development Company abandoned E. Kishi No. 5, workover, at 3130 feet.

Spindle Top and Sour Lake each showed one completion. Saratoga showed one producer good for 35 barbarrels and one water well.

4 years after Col. Drake drilled his first well

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Texas City Oil Exports Run High for Month of May

Texas City, June 14.—Shipments of refined and crude products from the port of Texas City during May reached a total of 2,641,891 barrels. The Humble Oil and Refining Company handled more than half of the amount sent out, and the Swiftsure Petroleum Company was the next heaviest shipper. Statistics are given below:

Shipments by water of refined and crude from Texas City, which included import, export and coastwise.

Company—	Refined Bbls.	Crude Bbls.	Total Bbls.
Humble Oil & Ref. Co.	None	1,561,800	1,561,800
Swiftsure Pet. Co.	None	638,932	638,932
Vacuum Oil Co.	None	291,401	291,401
Marland Ref. Co.	8,000	141,758	149,758
Total	8,000	2,633,891	2,641,891

Exports from Texas City

Company—	Refined Bbls.	Crude Bbls.	Total Bbls.
Humble Oil & Ref. Co.	None	214,974	214,974
Swiftsure Pet. Co.	None	118,211	118,211
Vacuum Oil Co.	None	64,000	64,000
Marland Ref. Co.	None	77,934	77,934
Total		475,119	475,119

Marland and Rycade Lease in Hunt County

Lone Oak, Texas, June 16.—The Marland Oil Company of Oklahoma has perfected a block of about 2000 acres of leases out of the C. W. Schultz survey, Hunt County, southwest of here. This block lies in a southeasterly direction from the old Harris wildcat, a dry hole drilled by the Gulf Production Company.

The area under lease was prospected by a core drill before leasing activities began. Prices paid ranged from $5 to $7.50 an acre.

The Rycade Oil Corporation has arranged a block of 10,000 acres, near the town of Cash, and between Quinlan and Dixon, in Hunt County. This block was surveyed by Fred Plummer, the geologist who mapped the Haynesville structure, in Louisiana, for the Roxana Petroleum Corporation.

George Will Direct Oil Field Managers School

Norman, Okla., June 16.—H. C. George, in charge of the United States Bureau of Mines investigation work in the Ardmore section of the state, has accepted the appointment as director of the newly created school of oil field managers, of the University of Oklahoma, according to Frank Buttram, vice president of the board of regents, in word received by Dr. J. S. Buchanan, president of the university.

School Started in 1923

The work of organizing a school for training of oil field managers within the college of engineering of the university began in the summer of 1923 and since that time Buttram as a committee of one appointed by the board of regents, has been searching for a man of technical qualifications to head the new school. Mr. George was selected several months ago, but did not decide to accept the position until this week.

Mr. George is a graduate of the University of Pittsburgh with the mining engineer degree, and also a graduate of the Pennsylvania State College with the bachelor of science degree. He taught mining engineering at the University of Pittsburgh for three years, and was director of the Wisconsin State Mining School from 1908 to 1911, after which he did commercial work for the Wisconsin Zinc Company until 1917. In 1917 he began consulting engineering work and in 1921 was appointed oil recovery engineer for the United States Bureau of Mines in California and later came to Oklahoma.

Is Author

Other than work in the field and with the United States Bureau of Mines, Mr. George has written many articles on petroleum and zinc deposits of America and considered one of the leaders of his field, according to Dr. J. B. Umpleby, former head of the school of engineering geology of the university.

Engineering work in petroleum refining, mining engineering, chemical engineering, mechanical engineering, electrical engineering, engineering geology, mechanical engineering, engineering physics and civil engineering have been given at the university for many years and the organization of the school for oil field managers does not incur the addition but of a few special courses in this technical division of the engineering work, according to J. H. Felgar, dean of the college of engineering.

To Organize Courses

The work of Mr. George will be to organize the various courses already being taught in sequence and groups in order that the study may prepare a student for this particular phase of engineering work, Dean Felgar said. The oil field engineer needs a knowledge of chemistry, physics, geology, mining, mechanics, distribution and storage problems, transportation and many other special lines of study. These studies will be grouped in order that students may begin work in September of this year for training in oil field management and engineering work.

Kansanians Encouraged by Reports of Oklahoma Curtailment; State's Production Trend Upward

Wichita, Kans., June 16.—There is an easier feeling abroad among producers in Kansas since operators in the Cromwell, Stroud and Tonkawa (deep sand) pools in Oklahoma have evidenced a willingness to get together to devise some means of holding down production. Kansas producers like others in the Mid-Continent are of the belief that much of the over-production now being talked about is having its origin from these three flush areas and that once the operators in these districts show an inclination to really curtail development work the situation will show signs of easing up almost immediately.

Failure of either the Prairie or Sinclair to reduce their posted schedules after the manner of the Magnolia Petroleum Company has imparted some strength to the crude market in the Sunflower state but operators are not showing any disposition to renew field work on an extended scale just because of this. The recent decision of Phillips Petroleum to curtail inside drilling in Kansas is having its effect and the action of the Derby Oil and Refining Company and White Eagle Oil and Refining Company in doing likewise cannot but help the situation in this state.

Late accounts of the performance of the Valerius well on the Eddie Oswald farm in Russell County makes the well an even better producer than was at first thought. Pending adequate facilities for handling the oil the well has not been materially deepened. Representatives of the Sinclair Pipe Line Company made an inspection of the well area this last week and it is probable that additional tankage will be erected by the pipe line company. The Valerius company has erected some small tankage on the lease. An indication of what the well may be good for is had in the report received last Wednesday which credited it with having swabbed a total of 1260 barrels in 19 hours. The Munsell well, offsetting the Valerius discovery well on the south, is nearing the pay and is expected to be brought in the first part of this week. The Stearns-Street Company's No. 1 on the Oswald farm probably will not reach the sand before the close of the week. This well showed for considerable gas.

The Benedum-Trees well on the S. R. Smith farm in the southeast quarter of 10-31-3e, has not come up to expectations and is credited with being good for from 40 to 50 barrels daily. A light shot probably will be used in an attempt to start production. Last Tuesday the well swabbed in the neighborhood of 55 barrels. Benedum-Trees are understood to be planning another location in the vicinity of the Smith well which is three miles without the city limits of the town of Udall in Cowley County. To all intents the pay in the Smith well is just above the top of the Mississippi lime. The E. B. Shawver well on the O. R. Durham farm in 35-30-3 some two miles north of the Benedum-Trees well is not promising. The well was deepened the first part of last week without appreciable results. A showing was picked up in this well at 2990 feet.

Indicating that production in the northern Greenwood County area near the town of Madison may extend to the west and northwest and southwest, the Selby Oil and Gas Company is giving promise in the Harris pool in the northeast corner of the west half of the northwest of 19-22-11. The east side of this area has been pretty well defined by dry holes.

Production of crude oil in Kansas continues steadily on the upward trend.

Gulf Well Extends Cotton Valley Field to North

Cotton Valley, La., June 18.—The Gulf Refining Company's Hodges 1, located in the southeast corner of the southeast quarter of the southwest quarter of section 11-21-10, a quarter of a mile directly north from the Invincible Oil Company's discovery well, is flowing at the rate of from eight to 10,000 barrels a day.

Hodges 1, belonging to the Invincible Oil Company, bailed dry at 2553 feet. This well is located in the southwest corner of section 11-21-10, offsetting the Ohio's gusher.

To Pass on Legality Of Alaskan Claims

Washington, D. C., June 18.—The legality of a score or more of mineral claims involving lands in the Chugach National Forest in Alaska will be the subject of a hearing to be held this week by the interior department. The claimants are the Alaska Coal Oil Company and the Alaska Consolidated Oil Fields, who bought up the claims from persons who filed mineral applications on the lands at the local land office at Anchorage, Alaska, a number of years ago.

The applications have been rejected by the general land office, and the department of agriculture, controlling the Chugach National Forest, has protested. An appeal was taken by the two companies to the secretary of the interior.

Standard Completes Line Into Cotton Valley Field

Cotton Valley, La., June 18.—Transportation of oil from the Cotton Valley field was greatly facilitated yesterday, by the completion of the Standard's eight-inch pipe line. This line was built from Weller Station and tank farm, near Homer, to the Cotton Valley district.

The company announced that it would begin running crude from the Cotton Valley wells immediately.

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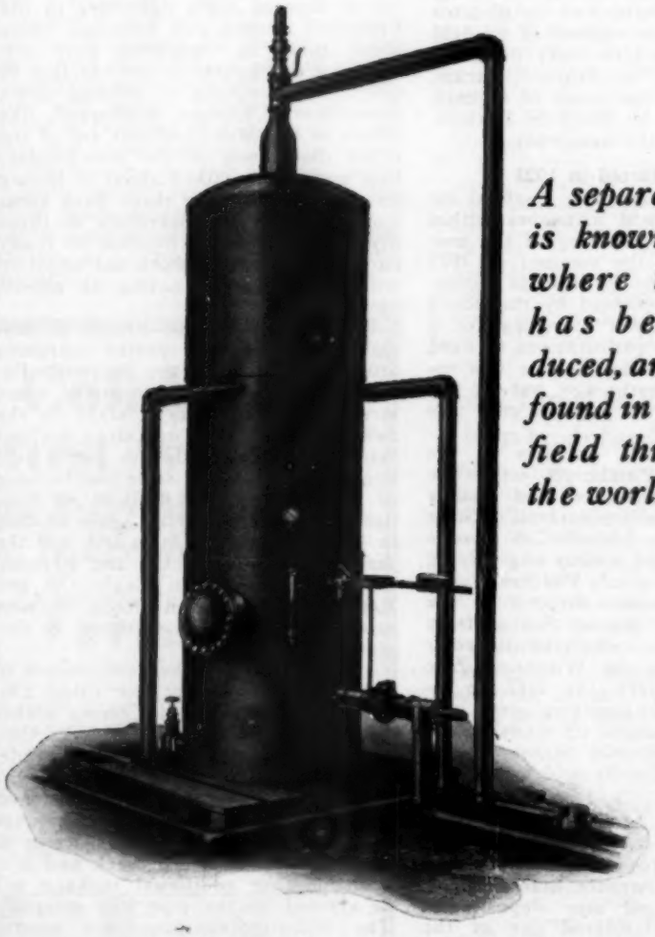

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Cotton Valley Drilling Regulations Revised

Shreveport, La., June 17.—H. W. Bell, supervisor of the Minerals Division Louisiana Department of Conservation, issued circular No. 20 yesterday amending revised resolution No. 40 which requires the use of three strings of casing at Cotton Valley. In that territory lying north of the south boundary of the north tier of forties, of sections 14 and 15 of township 21-10 the second string of casing may now be omitted, provided at least 450 feet of surface casing is set and jacketed to the surface with no less than 75 sacks of cement and provided that final water string be composed of 6-inch weighing at least 23½ pounds or 6¼ or 6⅝ weighing at least 24 pounds per foot. The circular states that this amendment may in the near future be extended further south but that high pressures now encountered in that direction make caution necessary for the time being. Ohio's Merritt 2 at Cotton Valley was opened wide for a short time yesterday but it made so much water that it had to be choked in again.

Standard to Take More Oil From Smackover

Shreveport, La., June 17. — The Standard Oil Company of Louisiana has announced that it will immediately start looping its pipe line system from the Smackover field, south to the Louisiana line increasing its runs out of that district by way of this line and tank cars to approximately 50,000 barrels daily.

The Standard announcement says that tank car shipments will be quite large from the Smackover field and construction of a loading rack will commence immediately. It is also noted in the report that the Standard of New Jersey is returning to the Mid-Continent crude oil market on a larger scale after deserting the district some time ago for the California production.

Tanker Movement From Los Angeles Declines

Los Angeles, Calif., June 14.—The movement of tankers from Los Angeles Harbor during the past week showed a decided slump from that of the previous week. Only 20 tankers departed as compared with 32 for the week ending June 7th.

Included in the shipments of the past week are 133,110 barrels of gasoline consigned to foreign ports and 35,955 barrels of gasoline consigned to Pacific domestic ports, making a total of 169,065 barrels, as compared with a total of 16,900 barrels for the previous week. Shipments other than that of gasoline showed a general decline to all ports, however the week ending June 7th., shipments were unusually large.

The record in barrels for the past two weeks follows:

	Last Week	Prev. Week
Tankers departed	20	32
Total crude moved	839,626	1,547,371
Total fuel moved	410,076	553,389
Total gasoline moved	169,065	16,900
Total kerosene moved	58,627	.....
Crude, Pacific domestic	237,487	526,593
Fuel, Pacific domestic	219,600	161,469
Gasoline, Pacific domestic	35,955	16,900
Crude, Atlantic domestic	507,139	956,778
Fuel, Atlantic domestic	.....	65,000
Gasoline, Atlantic domestic	.....	.....
Crude, Foreign	95,000	64,000
Fuel, Foreign	190,476	326,920
Gasoline, Foreign	133,110	.....
Kerosene, Foreign	58,627	66,675

Completions for Past Week in U. S. Fields

Summarized Review of Field Results for the Past Week

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Kansas	...	25	...	15	..	3	..	7	.....	1,743
Oklahoma	83	134	74	99	2	6	7	29	35,719	30,587
Texas	106	96	74	69	2	..	30	27	10,984	16,722
Arkansas	25	63	25	56	..	4	..	3	10,935	12,150
Louisiana	10	10	8	3	1	6	1	1	12,700	55
Eastern States	188	191	126	112	30	40	32	39	1,561	3,182
California (Southern fields)	25	16	25	16	..	..	..	..	13,115	5,415
Totals	437	435	332	370	35	59	70	106	85,014	69,854

Note—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Oklahoma

Company, Well and Location	Initial Production Bbls.	Depth
Burbank Field—		
Phillips Pet. Co. No. 8 SW¼ 11-27-5	2384	3011
Kewanee Oil & Gas Co. No. 8 SW¼ 18-27-6	500	2990
Gypsy Oil Co. No. 6 SE¼ 3-27-5	15	2986
7, SE¼ 3-27-5	200	2979
Phillips Pet. Co. No. 2 SE¼ 11-27-5	200	3075
3, SW¼ 11-27-5	200	3070
7, SW¼ 11-27-5	1000	3010
10, SW¼ 11-27-5	800	2974
14, SW¼ 11-27-5	1100	2098
Midland Oil Co.'s No. 5, SE¼ 13-27-5	150	2995
7, SE¼ 13-27-5	250	3000
16, SE¼ 13-27-5	166	2973
5, NW¼ 14-27-5	20	3073
9, NW¼ 14-27-5	101	3042
12, SW¼ 14-27-5	125	3175
Cosden Oil & Gas Co.'s No. 13, SE¼ 14-27-5	623	3054
Carter Oil Co.'s No. 8, SW¼ 16-26-6	608	2945
9, SW¼ 16-26-6	360	2970
7, SE¼ 16-26-6	120	2967
Cosden Oil & Gas Co.'s No. 12, SW¼ 14-27-5	200	3072
13, SW¼ 14-27-5	100	3071
16, SW¼ 14-27-5	45	3061
5, SE¼, 14-27-5	190	3050
10, SE¼ 14-27-5	425	3055
12, SE¼ 14-27-5	200	3020
15, SE¼ 14-27-5	336	3034
16, SE¼ 14-27-5	417	3030
Mid Kansas Oil & Gas Co.'s No. 1, NW¼ 26-27-5	170	2974
Twin State's No. 1, SW¼ 16-27-6	30	2963
4, SW¼ 16-27-6	175	2966
7, SW¼ 16-27-6	720	2980
Kewanee Oil & Gas Co.'s No. 3, SE¼ 18-27-6	50	2951
8, SE¼ 18-27-6	100	2993
9, SE¼ 18-27-6	350	2972
10, SE¼ 18-27-6	40	2960
Phillips Pet. Co.'s No. 4, SEc SE SW 11-27-5	100	3025
5, C W L NW SW SW 11-27-5	400	3022
12, C E L SE NE SW 11-27-5	2400	3012
13, NWc SW 11-27-5	1200	2975
16, NEc SW 11-27-5	1200	3043
Prairie Oil & Gas Co.'s No. 3, C S L SE SW SW 13-27-5	500	3001
5, C W L NW SW SW 13-27-5	480	3010
6, C W L SW NW SW 13-27-5	240	3001
7, NWc NW SW 13-27-5	377	3005
10, NEc SW 13-27-5	160	3001
11, C E L SE NE SW 13-27-5	160	3010
Marland Oil Co.'s No. 2, C S L SW SE SE 13-27-5	200	2982
3, C S L SE SW SE 13-27-5	190	2980
11, C SE NW SE 13-27-5	100	2986
14, C N L NE NW SE 13-27-5	300	3000
Midland et al's No. 1, SEc NW 14-27-5	100	3032
2, SWc SE NW 14-27-5	400	3060
4, SWc NW 14-27-5	480	3048
6, C NE SW NW 14-27-5	150	3085
7, C E L NE SE NW 14-27-5	316	3031
Cosden Oil & Gas Co.'s No. 1, SEc SW 14-27-5	150	3060
9, C N L NW NE SW 14-27-5	175	3071
2, C S L SW SE SE 14-27-5	324	3017
3, C S L SE SW SE 14-27-5	150	3042
4, SWc SE 14-27-5	415	3037
Creek County—		
C. G. Tibbens' Williams No. 1, SEc NW SE 34-15-8	10	2534
Farren & Wood No. 2 Jack, SWc NW 7-14-7	2045	4105
Crosby et al's Stewart No. 1 NEc SE NW SW 23-15-7	150	3290
Independent Oil & Gas Co.'s Beaver No. 11, NWc NE 35-14-8	*	2538
Hughes County—		
Berry Pet. Co.'s Alexander 1, C E L NE NW SE 4-9-9	2564	3326
Transcontinental Oil Co.'s No. 1 Tiger, SEc NE 5-9-9	192	3334
Foster Investment Co.'s No. 1 Tiger,		

Company, Well and Location	Initial Production Bbls.	Depth
C SE NW NE 4-9-9	325	3325
Kay County—		
Vernon Oil & Gas Co.'s Brokhouser 1, C SE SE 17-29-1w,	¶	1981
Osage County—		
Barnsdall Oil Co.'s No. 2, NEc NW 15-27-10	*	2510
Tidal-Osage Oil Co.'s No. 6, C S L SW NW 25-24-8	40	2215
Baxter & Winemiller's No. 6, C S L NE SE 14-25-10	100	1880
Foster & Norwood's No. 35, C S L SE NW SE 14-24-9	25	2138
Owen Osage Gas Co.'s No. 282, C S L NE NE SE 34-24-11	*	2106
292, C S L NW NW SW 4-23-11	*	1577
284, C W L SE SW NW 17-23-11	*	2096
294, C E L SE SE SW 27-23-11	*	1926
Mutual Oil Co.'s No. 7, NW¼ 28-20-12	900	1954
Seminole County—		
Tidal Oil Co.'s No. 2 Harjo, C NE SE NE 21-10-8	2438	3432
Gypsy Oil Co.'s No. 2 Stidham, C SW SW NW 15-10-8	480	2514
3 Stidham, C NW NW 15-10-8	¶	3459
Cromwell Oil & Gas Co.'s Roberts 1, C SE NE NE 16-10-8	2400	3522
Cosden Oil & Gas Co.'s King No. 2, C NW SE NW 20-10-8	888	3535
Stephens County—		
Brannon & Fisher's Worrell No. 1, SWc SE NE NW 22-1s-8w	25	1980

CORSICANA-POWELL

Davis & Speer's G. Boyd 1	60	1000
Garland Kent et al's J. F. Allen 1, wo	*	3250
Kirby Pet. Co.'s McKie 4	500	2970
McMann Oil Co.'s Chapman 8	50	3090
Seay-Cranfill et al's Harvard 1, wo	*	3000
Tidal Oil Co.'s Ramsey 14 "A"	45	1600
Webster & Pickens Sharp	*	3750

RICHLAND

Boyd Oil Co.'s J. R. Webb 2	500	2990
J. R. Webb 3	1000	2979
Max Gutman et al's Swink 2 "A"	25	2980
Elick Oil Co.'s Moran 1	*	2965
Hall mack Oil Co.'s J. R. Webb 1	200	2960
J. R. Webb 3	500	2955
Godley Oil Co.'s Allison 3	1800	2983
Oxford Oil Co.'s Davis 1	500	2967
Sun Co.'s Brown 4	250	2950

ARCHER COUNTY

Atlantic Oil Prod. Co. L. F. Wilson 1-A, (blk. 31)	35	1404
L. F. Wilson 6-A, (blk 31)	15	1420
R. R. Brader et al R. E. Farmer 1	90	1267
Chambers & Dobbs et al W. L. Andrews 2-B	6	929
Comet Pet. Co. J. H. White 1	20	1586
Crosslin et al L. L. Hudson 1	*	1844
Darr et al W. P. Ferguson 1	25	1733
D. S. Donovan et al J. H. White 2	*	1655
J. H. White 3	190	1626
Franklin et al's W. F. Parrish 4	*	1630
Griswold Oil Corp. L. F. Wilson 4-F	80	1600
L. F. Wilson 5-F	280	1602
Gulf Prod. Co. A. P. Nichols 3	100	1570
A. P. Nichols 4	80	1575
P. Siegler Sr. 1	100	1580
Halmack Oil Co. Helm 1	*	1920
Hawkins & Hester Mrs. J. H. Carter 5	50	1380
Hill & Miller Kemp & Kell 1	*	1825
Humble Oil & Ref. Co. L. F. Wilson 1	150	1588
Jones Oil Co. L. F. Wilson 9	30	1635
Kentucky Oil Corp et al L. F. Wilson 15-B	25	1580
Major Oil Co. Cowan-Turbeville 3	15	1039
Murchison & Fain W. R. Brown 1	*	1750
J. R. Coody 2	*	1650
May Rutty 1	200	1618
Murchison-Fain et al J. H. White 2, (lot 13)	300	1618
Panhandle Ref. Co. B. M. Orton 1	50	1587
Prairie Oil & Gas Co. L. F. Wilson 8-A	30	1585
R-F Oil Co. A. P. Nichols 1	300	1619
Riner & Bailey L. F. Wilson 6 (blk 29	100	1621
L. F. Wilson 8 (blk 29)	180	1623
Stock & Benninger L. F. Wilson 1	*	1650
Strong et al J. C. Hazelwood 1	*	1845
Texhoma & Standiforth K. & K. 3	45	1798
United Central Oil Corp. L. F. Wilson 1, (lot 12)	30	1632
Woodburn (Simms) Oil Corp. L. F. Wilson 2-A	30	1595

BURKBURNETT

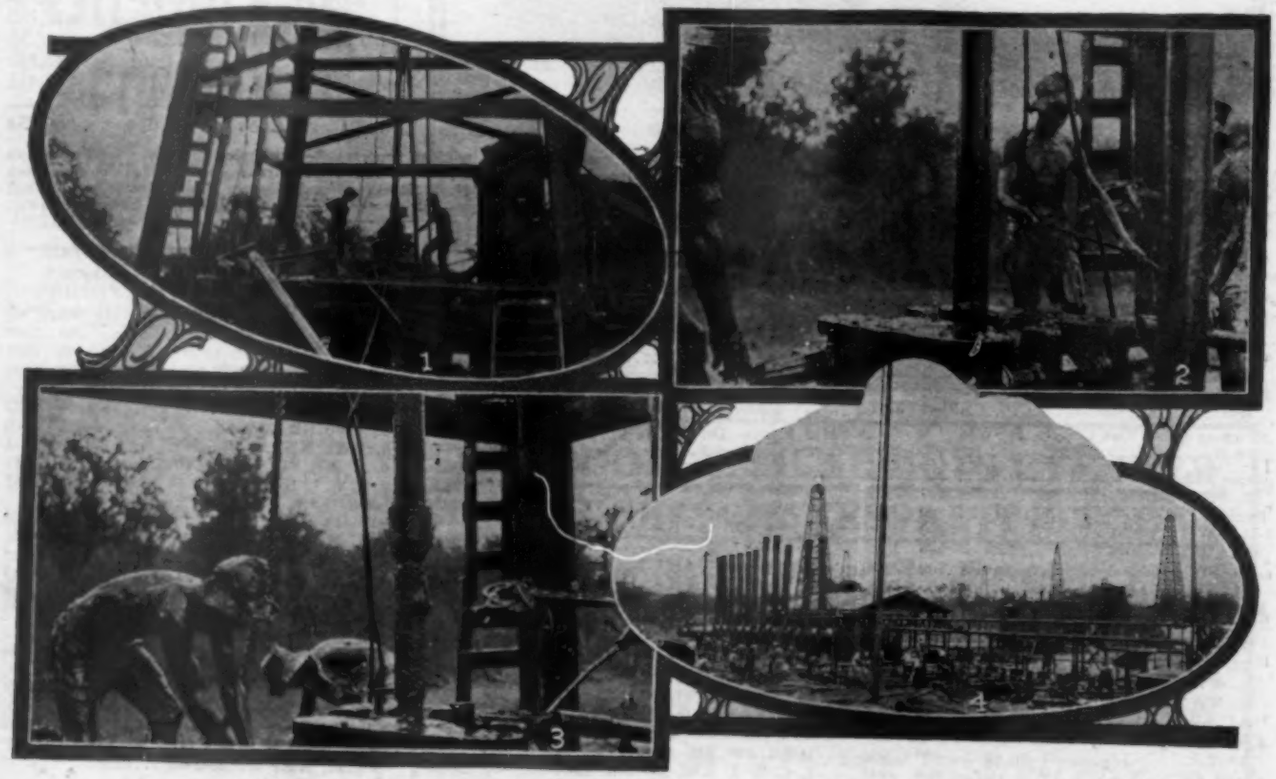
Couch et al Donohoe 3	40	1305
Grayce Oil Co. S. M. Daniels 2-B	5	590
Gulf Production Co. C. E. Martin 2	*	1820
Humble Oil & Ref. Co. J. Serrien 29	25	1695
Oil Investment Co. Roller 1	*	1753
Scott Pet. Co. Ward & Todd 7	40	1790
Staley-Langford et al Fee 9	80	1829

MIRANDO

Shasta Oil Co.'s Garcia 6	125	....
Carnahan Prod. & Ref. Co.'s 59	100	....
Quigg-Olsan's No. 3	100	....
Associated Oil Co.'s No. 10	75	....
Webster 1	¶28	....

ELECTRA

Camp Oil & Gas Co. L. P. Douglas 10-B	400	1950
Burnett Ranch Oil Co. Burnett Es-		



No chance for foot and mouth disease here. Views of the Mexican Gulf Oil Company's No. 61 Cacalilao just after it blew in and sprayed oil over the surrounding country. The new well is located on Lot 4, Fraction 1, north of La Palma. In the lower right hand corner is seen the Mexican Gulf's new "Mulcahy" station located on lot 1-C, Fraction 2, Cacalilao while in course of construction.

NOTICE OF RECEIVER'S SALE OF REAL ESTATE

The undersigned receiver of the Portland Oil and Refining Company in obedience to an order of the Jay Circuit Court of Jay County, Indiana, duly entered of record on the 9th day of June, 1924, in the cause wherein Wilda T. Rice is plaintiff and the Portland Oil and Refining Company is defendant, Cause Number 18699 entered of record by said court, the receiver will offer for sale and will sell at public sale on premises about one mile north of the public square in the City of Portland, Jay County, Indiana, on Thursday, the 10th day of July, 1924, between the hours of six o'clock A. M. and four o'clock P. M. of said day, the entire plant of said Portland Oil and Refining Company consisting of the following real estate:

All that part of the Southeast quarter of the northwest quarter of section sixteen (16), Township twenty-three (23) North of Range fourteen (14) East in Jay County, Indiana, lying west of the right of way of the Cincinnati, Richmond and Ft. Wayne Railroad. Also a part of the Southwest quarter of the Northwest quarter of said section, township and range aforesaid described as follows: commencing at the Southeast corner of said quarter thence west four (4) rods; thence North eighty (80) rods; thence east four (4) rods; thence south eighty (80) rods to the place of beginning; tools, pipe, pipe lines and connections, fittings, stills, machinery, tanks, trucks, and all of the real, personal and mixed property located at their said plant on the following terms and conditions to-wit: the said sale to be by sealed bids, four weeks after the date of the first publication, to the highest bidder subject to the approval and order of the court. One-third cash to be paid within ten days, one-third in ninety days and one-third in six months from the date of sale. The deferred payments to be evidenced by notes bearing six per cent. interest from date secured by mortgage on the property sold. All beneficial executory contracts to be included now held by said Portland Oil and Refining Company to be sold and assigned by said receiver upon full performance of the conditions of the sale of said property. All bidders at said sale of said property in order to qualify to bid on said property at said sale shall deposit with said receiver at the time of filing their bids a certified check or draft for One Thousand ($1000.00) Dollars payable to said receiver conditioned that the bidder will perform and complete the terms of his bid by full payment of the price bid according to the terms of this order of sale and which check shall be applied by said receiver on the cash payment of the successful bidder on said property. Said checks or drafts to be returned by said receiver to the unsuccessful bidders. It is further ordered by the court that said sale shall be free from any liens upon said property said liens shall attach to the fund realized from said sale as the same shall hereafter be determined by said court. E. E. EMMONS, Receiver.

Smith & Jay,
Attorneys for Receiver.
June 10-17-24.

Company, Well, Location—	Initial Production Bbls.	Depth
tate 1-B	250	1575
Humble Oil & Ref. Co. Burnett Estate 2-B	25	1590
Lanning & Moninger S. H. McCarty 4	30	1245
John O'Neil Burnett Estate 2	40	1590
Texhoma Oil & Ref. Co. Burnett Estate 5	*	1960
Underwood Drilling Co. S. H. McCarty 2	150	1692
United Production Co. Mrs. G. Jennings 4	35	1805
R. M. Waggoner et al Waggoner Bros. 1	6	1700
K-M-A AND IOWA PARK		
Art-Boone et al Munger 1	†	1810
Jones & Mitchell G. R. Hodge 1	*	1860
Tarver Oil Co. E. Daume 2	*	1860
DESDEMONA-GORMAN		
Marshall et al Martin 1	*	3245
Paschell et al Laney 2	*	2650
EASTLAND-RANGER		
Clayton et al Amis 1	†11	3228
Humble Oil & Ref. Co. Sneed 2	85	1188
Jerome McLester et al Hunt 1	*	1490
Panhandle Ref. Co. L. A. Hightower 19	35	1213
Republic Production Co. Sneed 1	25	1228
Teatsorth et al Scott 1	6	1505
STEPHENS COUNTY		
Empire Gas & Fuel Co. Wallace 7	30	1820
Haile & Knight G. P. Jones 5	100	3170
Mahlstedt Mook Oil Co. Bruce 3	130	2120
Quakins Pet. Co. Harmon 9	35	2085
Rochelle et al Mrs. Echols 1	250	3190
Swensondale Oil Co. Herrington 1	*	3330
GULF COAST		
Spindle Top—		
Sheffield, Telshaw & Conklin's Trembly 1	*	1160
Saratoga—		
Paggi Bros.' Queen City 42	35	1475
Weldon Oil Co.'s S. G. W. H. Island 5	*	1475
Batson—		
Ada Belle Oil Co.'s Paraffine 72	15	1125
Paraffine 73	10	375
S. R. Buchanan Millholme 76	15	1190
East Batson Oil Co.'s Counzelman-Carry 3	†	600
Deutser Oil Co.'s Hook 1, wo	25	1050
Goose Creek—		
Humble Oil & Ref. Co.'s Simms-Smith 57	*	2725
Sun Co.'s B. Smith 9, wo	75	2500
Gulf Prod. Co.'s Wright 5	20	2875
Sour Lake—		
Lake View Oil Co.'s Minor 5	*	2200
Hull—		
Republic Prod. Co.'s Dolbear 52, wo	350	2975
Dolbear 82	100	1975
Orange—		
Gulf Coast Oil Corp.'s Leaon 5	137	3175
Kishi Dev. Co.'s Kishi "E" 5, wo	*	3130
SOUTH LOUISIANA		
Vinton—		
Gulf Ref. Co. of La.'s Vincent 12, wo	5	2150
Edgerly—		
Gulf Ref. Co. of La.'s Bright-Penn 7, wo	50	3175

Arkansas

Smackover Field, Ouachita County—		
Arkansas Drilling Co.'s J. D. Reynolds 1, 24-15-17	100	2270
Giles et al's Shirley-Berg 1, 29-15-16	75	2313
Gilliland Oil Co.'s W. A. Smith 2, 36-15-17	85	2250
Morris et al's Miller 3, 27-16-15	50	2294
Skelley Oil Co.'s Chandler 4, 19-15-16	125	2300
Standard Oil Co.'s Minor 4, 21-15-16	30	2285
Sutton et al's Hughes 10, 21-15-16	90	2247

LUCEY

CHROME FISH TAIL BITS

3000 Bits in Use

Not a Failure in the Lot

There is but one infallible test of *Quality* for a finished product—*The Test of Actual Service.*

There are now over 3000 *Lucey Chrome Bits* in the fields doing rugged service—*Not One Defective Bit in the Lot.*

This goes to prove how well a product measures up to that final test. This service depends upon how well the raw materials are selected and tested, and how rigidly the process of manufacture is safeguarded.

Just as *Lucey* safegards *Quality* by rigid tests, so *You* can protect *Your Interests* by making this trade mark *Your* guide in buying.

Lucey Manufacturing Corporation of Texas
Houston, Texas

Beaumont, Texas — El Dorado, Ark.
Smackover, Ark. — Corsicana, Texas
Shreveport, La. — Mexia, Texas
Dallas, Texas

"Wherever LUCEY There's Oil"

STEEL

Company, Well, Location	Initial Production Bbls.	Depth
A. F. Tarver et al's Fincher 3, 29-15-16	40	2265
White et al's Watts 4, 30-15-16	100	2274
Wonder State Oil Company's Anderson 5, 23-15-17	80	2270
Smackover Field, Union County—		
Arkansas Fuel Oil Co.'s LaGrone 4, 1-16-17	40	2250
Bond Trust's Powell 1, 19-16-15	700	2060
Bond & Evan's Wilson 3, 19-16-15	600	2064
Caldwell et al's Hancock 1, 25-16-16	500	2110
Gulf Ref. Co.'s A. Moore 1, 24-16-16	100	2000
Keene & Wolfe's Henley 1, 28-16-15	65	2055
Lion Oil & Ref. Co.'s Hedgewood 3, 24-16-16	500	2080
Marine Oil Co.'s Murphy 4, 15-16-15	150	2060
Olvey et al's Moore 2, 24-16-16	450	2080
Preston Oil Co.'s Churchyard 1, 21-16-15	275	2050
Pure Oil Co.'s Hayes 5, 21-16-15	100	2060
Sun Oil Co.'s Wilson 2, 19-16-15	150	2100
The Texas Co.'s Alphin 4, 3-16-15	30	1970
Unity Pet. Co.'s Alphin A-4, 24-16-16	500	2120
Alphin C-1, 24-16-16	6000	2120
Total, 25 wells	10,935	

Louisiana

Company, Well, Location—	Initial Production Bbls.	Depth
Caddo District—		
Dixie Oil Co.'s Robertshaw 60, 14-21-15	15	1670
Gulf Ref. Co.'s Ferry Lake 217, 15-20-16	60	2285
Total, 2 wells	75	
Bellevue Shallow Field—		
Bliss & Weatherbee's Fee B-14, 15-19-11	*	430
Humble Oil & Ref. Co.'s Bliss & Weatherbee A-18, 10-19-11	30	402
Total, 2 wells	30	
Cotton Valley District Webster Parish—		
Gulf Ref. Co.'s Hodges 1, 11-21-10	8400	2561
Humble Oil & Ref. Co.'s Babb 2, 14-21-10	800	2568
Bodcau Lumber Co. 1, 14-21-10	¶35	2527
Ohio Oil Co.'s Merritt 2, 14-21-10	3500	2546
Total, 4 wells	¶35-12,700	

Stanley Belting

Recommended and used extensively for drilling, beam pumping, powers, vacuum pumps, compressors and wherever continuous reliable delivery of power is desirable.

If you are not using Stanley Solid Woven Cotton Belting, try one on our "say so." Write your own guarantee.

STANLEY BELTING CORPORATION
13 North Jefferson, Chicago, Ill.
320 Broadway, Room 1318
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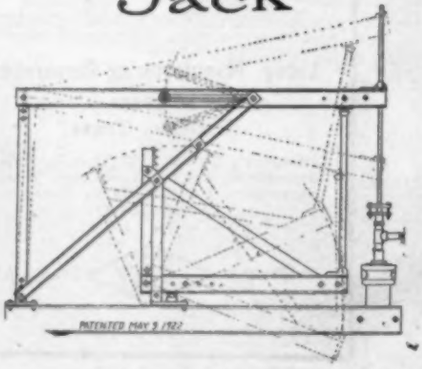
T. R. Bartlett, P. O. Box 909, Tulsa.
Phone Cedar 4588R.
W. R. Tucker, 5311 Richard Avenue,
Dallas, Texas, Phone H-6525
Pacific Coast Rubber Co.,
816 Mission St., San Francisco, Cal.
Mountain States Rubber Co.,
1238 Broadway, Denver, Colo.
On permanent display at Tulsa Industrial exhibition

California

Company, Well, Location—	Initial Production Bbls.	Depth
Torrance—		
Superior Oil Co.'s Joughin 32	1050	3829
Joughin 33	1200	3560
Joughin 34	1050	3838
Fullerton Oil Co.'s Cotton 2	700	3740
Standard's Felker 1 (wo)	50	3678
Ellinwood 1 (wo)	250	3744
Marble fee 12	475	3800
Marble fee 9	300	3724
C. C. M. Oil Co.'s Del Amo 13	800	3673
Torrance 34	250	3725
Shell's Torrance 2	100	3510
Wheeler Ridge—		
Standard's No. 9	400	4001
Long Beach—		
Pomona Oil Co.'s No. 1 (wo)	1050	4550
W. R. Ramsey's Long Beach B-3	1200	4824
South Slope Oil Co.'s Rafferty 1	350	4065
Shell Co.'s Stratton 1 (wo)	875	5274
Alamitos 13	625	5002
Oceanic Oil Co.'s Edwards 3 (wo)	500	4996
Leonard Oil Co.'s White 4 (wo)	60	4003
Dabney, Colter & Delaney's Hoffman 1	80	4626
General Petroleum's Scoco 3	115	4445
Petroleum Midway's Bauman 2	125	4550
Bellridge Oil Co.'s Britch 1-A	700	4898
Pan American's McKeon 1	800	4996
Santa Fe Springs—		
General Petroleum's Jalk 9	10	4600
Total	13,115	

The Jensen Straight Lift Jack



The Polished Rod *can't* Bend

The Jensen Jack lifts it *Straight up,* and lowers it *straight down*

without any strain or excessive wear on the Rod, or on the Stuffing Box Rings, or on anything else.

The Straight Lift makes a five-foot stroke practical. Made in No. 2 and No. 3 sizes.

Jensen Bros. Mfg. Co.
Nowata, Oklahoma

Eastern States

PENNSYLVANIA

Company, Well, Location—	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co. Leasure 1	4	....
Melvin 161	*	....
Melvin 163	3	....
Jones 194	3	....
Weston-Halleck 65	3	....
Bingham 410 tract 24	2	....
Bingham 453 tract 89	2	....
Johnson 46	3	....
Bingham 1	3	....
N. W. M. Co. 49	3	....
Redfield 90	2	....
Wright & Co. G. Freeman 1	4	....
Burns & Co. Barse 1	4	....
W. N. Hunter Hostetter 1	4	....
Griderion Oil Co. Duke 1	4	....
Duke 2	4	....
Bliss Oil Co. Burns 25	3	....
C. H. Williams Moore 1	4	....
L. M. Lawrence & Co. Lawrence 1	3	....
Dodge & Hilliard Hilliard 1	3	....
W. C. Kennedy Co. Bingham 130 tract 45	3	....
Kennedy 98	3	....
Denwood Oil Co. Garlick 1	3	....

Company, Well, Location—	Initial Production Bbls.	Depth
C. H. Corwin Corwin 2	3	....
J. H. Gibson Gibson 2	3	....
J. W. Wooster Wooster 1	3	....
J. Minnick Morse 1	3	....
Hope Oil Co. Sile 1	3	....
Devore & Patton Marvin 1	*	....
Venango County—		
Titus, McKim & Co. James 2	3	....
Gregory & Crawford Evell 23	2	....
Espy Oil Co. McCray 8	2	....
Cunningham & Co. Atwell 25	2	....
Hagerty & Co. Hagerty 1	2	....
Rouseville Drilling Co. Plummer 58	2	....
Sweetapple & Co. Sweetapple 32	2	....
Porter, Hovis & Co. McFadden 3	2	....
Braymer & Co. Smith 20	2	....
S. Y. Young Lot 74 tract 66	2	....
Newson & Co. Strawbridge 4	2	....
W. A. Deets Richey 17	2	....
Butler County—		
Bell Bros. Tamer 2	3	....
Eibeck & Co. Christy 3	4	....
Milleman & Co. Burr 1	1¼	....
Gerner & Co. Stoops 4	3	....
American Natural Gas Co. McGinley hrs. 1	*	....
R. N. Hays Hays 4	2	....
Sutton & Co. Snow 1	2	....
Pfeifer & Co. Ransey 3	2	....
Clarion County—		
Lemberton & Co. McKenzie 3	1½	....
McLaine & Co. Reed 4	1½	....
Alum Rock Gas Co. Grais 4	2	....
Foust & Co. Terwilliger 2	2	....
J. Berlin & Co. Meherton 2	2	....
Center-Middle Field—		
Pennsylvania Oil Co. Lot 387 tract 16	2	....
H. A. Siggins Lot 51 tract 1	1½	....
C. A. Carnahan T. & W. 53	1½	....
Rock Grove Oil Co. Bingman 10	2	....
Allegheny County—		
American Natural Gas Co. N. Straub 1	50	....
Mary Irwin, Trustee, Irwin 1	1¼	....
Mercer County—		
E. A. Brem & Co. McConnell 1	2	....
Greene County—		
Ninevah-Conrad O. & G. Co. R. R. Baldwin 2	1¼	....
NEW YORK		
Allegany County—		
Lesper & Co. Lesper 1	7	....
Funk & Matson Lester 1	7	....
Hill & Hatch Hill 1	3	....
Bartoo & Co. Bartoo 1	3	....
F. L. Williams, Williams 1	*	....
Phillips & Co. Phillips 1	3	....
Goodrich & Co. Dusenberry 1	2	....
WEST VIRGINIA		
Ritchie County—		
Pittsburgh-W. Va. Gas Co. Bert Smith 3	*	....
Miracle Oil Co. J. Vincent 1	3	....
Hope Natural Gas Co. E. J. Reed 2	*	....
J. M. Reed 2	*	....
McGinnis & Co. J. B. Marke[illegible]	*	....
Buchannan Oil Co. Winfred Woo[illegible] 3	10	....
Lincoln County—		
Huntington Dev. & Gas Co. W. P. Adkins 1	12	....
Superior Gas Co. Edna Stowers 1	12	....
Laurel Dev. Co. W. C. Carroll 2	12	....
Columbia Gas & Electric Co. Joshua Mays 398	1½	....
G. T. Ray & Son S. C. Lawson 1	1½	....
Doddridge County—		
Philadelphia Oil Co. Thos. J. Smith 2	50	....
Carnegie Nat. Gas Co. Dick Kelley 1	1¼	....
Hope Natural Gas Co. Effie D. Carter 1	*	....

Reduces Cut Oil and B. S. 50% to 80%

Amazing Recent Experience Is Absolute Proof!

Any good engineer will tell you that when you force a high volatile fluid like crude through a suction (standing) valve no bigger than the discharge (traveling) valve, you do your darndest to **encourage** cut oil and B. S.

You expose the fluid to a certain amount of **vacuum**—one of the greatest producers of cut oil and B. S. in the world.

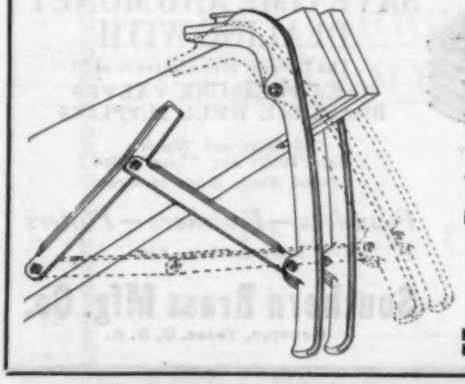
But you can't get away from this condition with an ordinary standing valve. Both valves being inside the same working barrel, one **can't be** bigger than the other.

The ROARK STANDING VALVE

is making such sensational records in cutting down B. S. and cut oil because it is the only one that is **outside** the working barrel. It is **bigger** than the traveling valve, as science says a suction valve should be. **This one feature recently reduced the B. S. of a Carter Field well from 3 to 4% to ½ of 1%.**

These are facts worth remembering the next time you are in the market for Standing Valves! You can get ROARKS at your supply house or direct—and take it from those who are using them, you're missing a real bet if you don't.

Investigate this Improvement Today



KEEP THE PULL STRAIGHT

When Pumping With a Long or Short Stroke

AND ELIMINATE WEAR

To Beam, to Cables, to Polish Rod, to Packing

With

THE REX WALKING BEAM YOKE

It's Stationary on the Beam—No Moving Parts

Descriptive booklet with prices sent on request. Orders filled promptly

REX TOOLS

P. O. Box 1695 Houston, Texas

1171 East 32nd St. Los Angeles, Cal.

Eclipse Deepwell Pulling Machine

For 3000 Feet Wells and Deeper

To the Producing Fraternity:

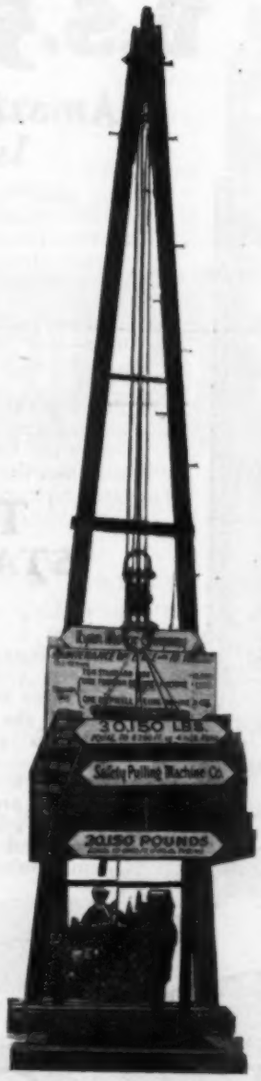
Seeing that the market for crude oil is extremely low, it is up to every producer to produce a barrel of oil in the most economical way, so why use a standard rig, which you can only use on one well, and will cost from $1000.00 to $1200.00 each, not mentioning the cost of power for operating the derricks.

Our Deepwell Pulling Machine sells for $475.00 F. O. B. Independence, and will handle from one to twenty wells, depending on the condition of wells.

There are various makes of tractors, of various prices running from $600.00 to $1800.00 each. Any of them are good, but some better than others. Any of these will operate our machine.

For instance, our machine and the Fordson Tractor will cost $1,555.00. Don't you think this is a fair price for the service of so many wells?

Figure this: 20 standard rigs $20,000.00; one Deepwell Machine and Fordson Tractor $1555.00. A word to the wise is sufficient.



Specifications

Mast 8x10x36 ft., Douglass Fir A-Style, Two Wheel Truck, two 16" Bronze bearing crown pulleys, 2½ Steel Pin mounted in malleable boxings. Large supporting plate 16" dia. between crown pulleys, eliminating any chance of bending pin.

Reel or Drum: 32 lb. 8¼ casing filled with concrete for winding drum, differentials banded with 3/16 band iron, brake surface 6"x40", choke brake style same as star drilling machine.

The whole reel assembly is mounted on 2¾ square steel shaft extending clear through reel, secured by three heavy castings.

For sale by all Supply Companies

Manufactured by

SAFETY PULLING MACHINE COMPANY

INDEPENDENCE, KANSAS

SAVE TIME AND MONEY DEALING WITH

The Largest Manufacturer of

BACK PRESSURE VALVES
BRASS OIL WELL SUPPLIES

All Sizes and Weights
For "Drill" and "Line" Pipe
Special Kinds Made to Order

Founders — Finishers — Platers

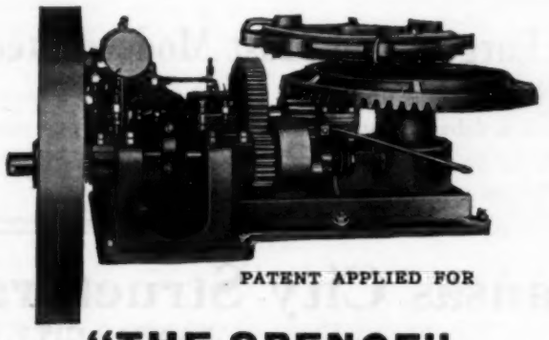
Write for Price List

Southern Brass Mfg. Co.

Houston, Texas. U. S. A.

Company, Well, Location—	Initial Production Bbls.	Depth
Wetzel County—		
Hope Natural Gas Co. Jeremiah K. Long 1	¶3½	....
Manufacturers Light & Heat Co. Milt Booth 1	*	....
Lloyd Gorrell J. E. Slider 1	¶3	....
Boone County—		
Laurel State Oil Co. Dell Hill & Co. 1	¶4	....
Owens Bottle Machine Co. John Mullen 1	¶4	....
Gilmer County—		
Hope Const. & Ref. Co. N. C. Fisher 3	¶3	....
Hope Natural Gas Co. Westfall-Riddle 1	¶3	....
Tyler County—		
A. J. Camourour & Co. T. J. Ingram 1	*	....
Hope Construction & Ref. Co. M. V. Baker 1	¶¼	....
Clay County—		
United Fuel Gas Co. E. W. Summers 1	20	....
Wirt County—		
O. E. Grow Rose Whitecotton 17	7	....
Calhoun County—		
Chemical Oil Co. D. M. Miller 1	10	....
Roane County—		
Carter Oil Co. Simmons heirs 1	¶2½	....
Harrison County—		
Aizpurin Oil Co. Thornton-Sutton 1	¶3½	....
Wood County—		
J. L. Watson Watson 1	*	....
KENTUCKY		
Allen County—		
Kenmont Oil Co. W. T. Keen 16	*	470
Ruby Consolidated Oil Co. F. Dyson 9	5	349
B. Hinton Davenport 7	5	367
L. F. O'Toole J. W. Knight 6	30	310
Forrest & Co. Lyles 5	*	286
Work & Co. Guy 6	*	287
McAlpin & Co. Dinwiddie 3	*	300
Russell Oil Corp. Wygall 5	*	300
Burton Bros. 13	*	418
T. A. Sheridan & Co. F. Gibson 15	*	396
F. Gibson 16	*	394
Unknown Parties Levi Hinton 5	3	308
Cumberland County—		
C. P. Taneyhill A. Williams 2	*	850
Wedder & Co. Thompkins 1	17	190
W. S. Raydure Williams 1	*	500
Combest-Morris Interests Groce 2	*	543
E. M. Treat & Co. Dickens 4	*	475
Turner & English Anderson 1	*	550
McClintock Oil Co. Anderson 1	150	....
Johnson-Magoffin Counties—		
R. G. Gillespie Dennis Conley 13	5	....
Eastern Kentucky Oil Co. H. McCarty 2	5	....
Atlantic Oil Prod. Co. Frank Conley 12	10	....
W. P. Witten 9	2	....
Hudson & Collins Herman Groce 4	25	....
New Domain O. & G. Co. J. G. Gardner 7	20	....
Barren County—		
Lew J. Emery Sons Co. Harston 18	6	23[illegible]
Harston 19	4	23[illegible]
B. B. Rice & Co. Bowles 1	1	55[illegible]
Burke & Burdick Holtzglow 1	*	24[illegible]
Viegler Bros. Dreener 2	15	51[illegible]
Warren County—		
Makeever Bros. Young 8	20	692
Wood Oil Co. J. Isabell 12	8	1197
Big Jack Oil Co. R. L. Morris 38	5	1072
J. L. Burke & Co. M. J. Collett 1	*	329
Lee County—		
Marquis & Congelton Church lot 1	5	....

Company, Well, Location	Initial Production Barrels	Depth
Hupp & Duff Dave Mays 5	25	....
Dave Mays 8	25	....
Elliott County—		
Campbell & Wheeler Diles 2	2	....
Jack Peters 4	10	....
Isom Peters Lecuir 1	5	....
Greene County—		
New Domain O. & G. Co. Hudson 1	¶1	315
Harmon 1	¶1	340
W. W. Bailey 1	*	302
Simpson County—		
Passaic O. & Ref. Co. T. Boyd 1	3	649
Hopkins County—		
Copper-Flash Oil Co. Williams 4	40	500
Powell County—		
Kelley, Fulks & Co. Nancy C. Mays 12	15	....
Owsley County—		
Combs Bros. Drilling Co. Elmer Evans 2	10	....
Estill County—		
Wood Oil Co. Sam Tipton 17	3	....
Lawrence-Johnson Counties—		
Union Gas & Oil Co. Proctor Sparks 25	40	823
Owensboro District—		
Kentucky Oil Co. W. G. Payne 2	3	740
SOUTHEASTERN OHIO		
Noble County—		
C. C. Cody J. A. Bona 1	2	....
E. L. Hutchion & Co. Frank Nau 11	3	....
Felix Gerst & Co. John Fogel 1	*	700
Jefferson County—		
Thompson & Co. Albert Bell 1	*	....
Ernest Ferguson & Co. D. Criswell 7	10	....
Muskingum County—		
Carter Oil Co. George Varner 1	3	....
Washington County—		
O. O. Kinsey & Co. Coal Lands 3	2	....
CENTRAL OHIO		
Hocking County—		
Preston Oil Co. Hamilton Bros. 13	5	....
Longstreth 22	¶¼	....
Gordon Oil Co. C. R. Stone 3	¶¼	....
Sunday Creek Coal Co. Sunday Creek 112	8	....
Carter Oil Co. Koernhon-Dunlap 7	15	....
Licking County—		
Wehrle Interests J. L. Watson 4	2	....
Ralph Bros Inc. J. M. Stevens 1	*	....
C. E. Saltzgaber & Co. J. W. Motherspast 4	5	....
Knox County—		
E. M. Snyder G. W. Miller 13	3	....
G. W. Miller 14	3	....
Wayne County—		
Glen Harmon & Co. M. Haas 1	30	....
Perry County—		
Henry Bros. Henry 19	5	....
Holmes County—		
East Ohio Gas Co. Thos. F. Connor 4	¶¼	....
Cuyahoga County—		
Hulse & Koontz C. E. Hall 1	¶1	....
Athens County—		
Logan Gas Co. S. J. Wildman 1	¶¼	....
NORTHWESTERN OHIO		
Allen County—		
C. A. Peavey & Co. Elias Lewis 8	10	1350
South Fork Oil Co. C. E. Wisher 3	3	1310
S. G. Metzger & Co. G. Etzkorn 1	5	1256
W. L. Parmenter A. Brooks 9	6	1300
Mercer County—		
A. W. Neely & Co. Fecher Heirs 4	25	1287
Logan Oil Co. G. Bergmier 2	*	1300
Ottawa County—		
Onsel Bros. Co. E. Sarnes 2	14	1325
Zorn-Hornung Oil Co. Belle Clay 8	10	1326
Wood County—		
Allen Coen & Co. Roe Heirs 4	5	1346
Rany-Sage Oil Co. W. M. Mercer 1	4	1480
Paulding County—		
Washington C. H. Oil Co. Ryal 1	300	1455
Van Wert County—		
McClure & Co. Foor 1	80	1239
Darke County—		
E. G. & J. Henderson John Miller 11	18	1254
Hancock County—		
A. S. Cochran & Co. R. W. Moore 1	¶¼	1200
INDIANA		
Gibson County—		
Gray & Co. John Wirtz 1	10	1478
ILLINOIS		
Marion County—		
Petro Oil & Gas Co. J. Kinsey 11	50	783
Mt. Carmel Oil Synd. W. Kent 5	75	753
Lawrence County—		
Snowden-McSweeney Oil Co. C. B. O'Donnell 40	15	1300



PATENT APPLIED FOR

"THE SPENCE"

A combined gas engine and single eccentric pumping power with a 10½ H. P. gas engine, positive governor, gravity feed lubrication and wico ignition for gas or gasoline equipment.

This power has been pronounced by some of our largest producers as one of the best pumping units on the market for wells in territory of medium depth.

Manufactured and sold by

H. M. SPENCE

PARKERSBURG, W. Va.

Cosden & Company

HIGH GRADE

PETROLEUM PRODUCTS

TULSA, OKLAHOMA

"WRITE FOR OUR CATALOG"

The Largest and Most Modern Steel Plant in the West—

This modern, up-to-date plant backed by a warehouse stock of Ten Thousand tons and a fabricating capacity of 5,000 tons per month assures 2nd and 3rd morning delivery to Oklahoma and Northern Texas; 5th and 6th morning delivery to Gulf Coastal Points.

Kansas City Structural Steel Company

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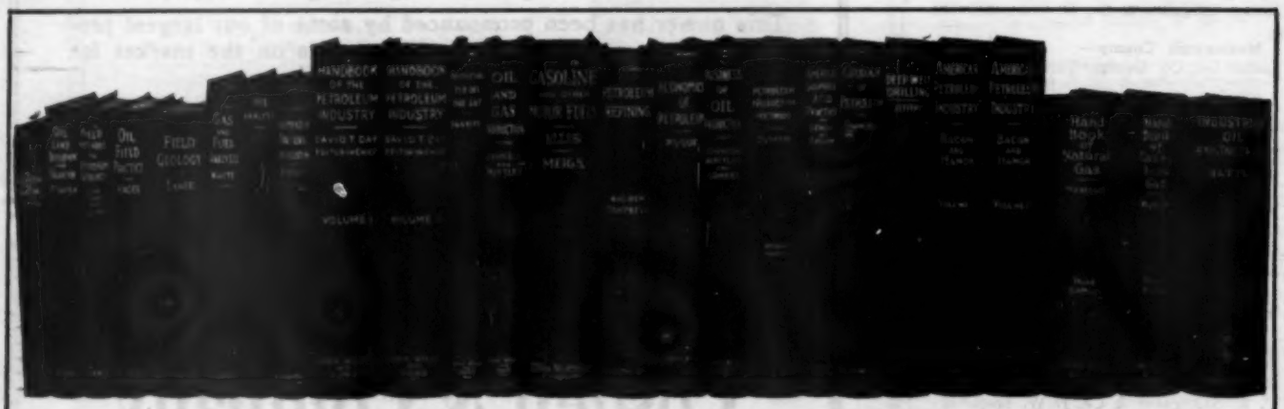

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Say you saw it in The Oil Weekly

Permits Granted and Locations for New Wells
(Kansas—Oklahoma—Texas—Arkansas—Louisiana)

TEXAS

Archer County—Atlantic Oil Prod. Co.'s L. F. Wilson A-5, Amer Trib sur, 150 ft to N and E lines; A-1, 150 ft to S and W lines; A-2, 150 ft to N and W lines. Roy I. Carter's J. H. White 1, Amer Trib sur, 150 ft to S and E lines. Hobbs & Barclay's W. O. Wright 1, TE&L Co. No. 607 sur, 150 ft to S and W lines. Lowry & Cavin's W. Harbison 1, Anderson pasture sur 150 ft to S and E lines. McCarty Oil Co.'s L. F. Wilson 3, E. Hall sur, 900 ft S No. 1; 2, 150 ft to S and W lines. Sunshine State Oil & Refg. Co.'s J. M. Key 1, Club Ranch sur, 150 ft to S and W lines; H. Reilly 1, H&TC Ry sur. 2463 ft to N and 1912 ft to E line. Murchinson & Fain's J. H. White 3, Amer Trib sur, 340 ft S No. 1. Humble Oil & Refg. Co.'s S. T. Jones 1, F. Rodemeyer sur, 150 ft to S and W lines. Wilmut Farm Oil Co.'s M. Rutty 1, J. O'Reilly sur, 150 ft to N and E lines. Oil Investment Co.'s L. F. Wilson F-1, Amer Trib sur, 150 ft to W and 450 ft to N line. Gulf Prod. Co.'s P. Seigel Sr. 2, E. Hall sur, 150 ft to N and W lines. Comet Petroleum Co.'s J. H. White 2, Amer Trib sur, 150 ft to N and W lines. Archerduke Oil Co.'s L. C. Herron 1, TE&L No. 1830 sur, 465 ft to E and 150 ft to S line. N. Schwartz's E. Birdwell 1, C. Wright sur, 150 ft to S and E lines. D. A. Kitsos' L. F. Wilson 1, Amer Trib sur, 150 ft to N and 345 ft to E line. Prairie Oil & Gas Co.'s L. F. Wilson E-8, Amer Trib sur, 352 ft E No. 6.

Atascosa County—H. L. Hamilton's S. R. Hughes 11, Jno. Sharp sur No. 518, 250 ft to E and 1380 ft to N line.

Brazoria County—Humble Oil & Ref. Co.'s H. Bryant A-1, S. F. Austin sur, 200 ft to S and 400 ft to W line. No map.

Callahan County—Tom Bryant's R. B. Forbes 1, W. Converse sur, 750 ft to W and 430 ft to S line. Borealis Oil Co.'s J. E. Pruett 1, TE&L sur, 300 ft S No. 2; 2, 300 ft S No. 4; 3, 300 ft E No. 2; 4, 300 ft N No. 2. Turner & Biggers' L. J. James 1, Bayland Asy sur, 400 ft to S line; 2, 400 ft to E and 200 ft to S line; Mrs. S. Barnes 1, T&NO Ry sur, 600 ft to N and W lines.

Carson County—Texas Co.'s S. B. Burnett 4, I&GN Ry sur, 330 ft to W and 450 ft to S line.

Clay County—Gulf Prod. Co.'s C. M. Warsham 4, T&NO Ry sur, 600 ft S No. 1.

De Witt County—L. G. Wade's A. J. Chaloupka 1, J. G. Swisher sur, 110 ft to N and 600 ft to W line.

Duval County—Progress Oil Co.'s Mrs. A. Tinney 2, No. 8 sur, 116 ft from SW cor. Iowa-Oklahoma-Texas Synd.'s Wm. Peters 2, sec 33, blk 5, 768 ft to E and 807 ft to S line.

Eastland County—C. W. Donley's C. S. Wheeler 2, McL. C. S. L. sur, 160 ft to N and W lines. A. H. Flaherty et al's L. G. Ross 1, McL. C. S. L. sur, 155 ft to S and W lines.

Guadalupe County—Danciger Oil Co.'s A. J. McKean 3, H. Cottle sur, 379 ft W No. 4; 4; 5, 560 ft E No. 2. Grayburg Oil Co.'s H. H. Weinert 1, H&TC Ry sur, no location.

Galveston County—Sun Oil Co.'s E. K. Cade et al 7, Fitzsimmons sur, NE No. 4; E. K. Cade C-1 M. Duncan sur, 150 ft to E and 143 ft to S line.

Harris County—Texas Exploration Co.'s Jno. Warren 19, S. Everett sur, 1605 ft to S and 1658 ft to W line. Humble Oil & Ref. Co.'s Shilling 30, Wm. Scott sur, 50 ft to N and 450 ft to E line.

Hardin County—East Batson Oil Co.'s F. Conzleman 6, F. H. Green sur, no map. Rio Bravo Oil Co.'s B-210, BBB&C Ry sur, 1075 ft to S and 510 ft to W line; B-211, 900 ft to S and 400 ft to W line. Humble Oil & Ref. Co.'s Hardin County 32, S. Jackson sur, 550 ft to N and 350 ft to E line.

Hutchinson County—Prairie Oil & Gas Co.'s M. M. Weatherby 1, B-Y sur, 330 ft to S and E lines.

Jefferson County—J. S. Wynn's Trembly & Davis 1, J. A. Veatch sur, NW cor.

Johnson County—Wilfley & Simpson's H. Hix et al 1, McBrayer sur, 150 ft to E and 105 ft to N line.

Kleberg County—Humble Oil & Ref. Co.'s King A-10, El Infernillo sur, 3 mi E of No. 9-A.

Liberty County—Gulf Prod. Co.'s Phoenix Dev. Co. 29, J. Devore sur, 450 ft S of NE cor; D. Hannah 15, W of No. 2. Republic Prod. Co.'s Dolbear 85, J. Devore sur, 602 ft to N and 3262 ft to E line. Humble Oil & Ref. Co.'s Marshall 5, J. Devore sur, 75 ft to N and 50 ft to W line. The Texas Co.'s D. Hannah 3, J. Devore sur, 50 ft to S and E lines.

Live Oak County—A. W. Kollatt's J. T. Mahoney 1, J. K. Mahoney sur, 155 ft to W and 300 ft to Frio River.

McMullen County—San Balt Petroleum Co.'s J. Stitz 7, G. Garner sur, 410 ft S No. 3.

Milam County—Noack Oil Co.'s J. W. Roark 3, T. J. Chambers sur, NE cor. R. Von Gunten & Jno. Stoek's R. Von Gunten 2, M. L. Delgrado sur, 200 ft to S and W lines.

Navarro County—G. C. Kent's T. Boyd 1, Jas. Smith sur, 150 ft to S and E lines; Allen Bros. 2, J. D. Matthews sur, 1200 ft to S and W lines; R. D. Fleming 10, Jno. Harris sur, 150 ft to N and 175 ft to W line. Sun Oil Co.'s P. Brown 6, Jno. White sur, 300 ft N No. 5.

Potter County—Amarillo Oil Co.'s Mrs. J. C. Warwick 1, sec 16, blk Y, 1160 ft to N and 3650 ft to E line.

Shackleford County—Fred A. Lain's L. Griffith Hrs. 3, Insane Asy sur, 900 ft to E and 862 ft to S line. Jackson & Co.'s E. H. Ezell 2, Insane Asy sur, 150 ft to E and 450 ft to S line. Humble Oil & Ref. Co.'s M. I. Miles 1, T&P Ry sur, sec 33, 660 ft to E and 300 ft to S line. Jno. L. Groces's J. H. Elliott 1, Insane Asy sur, 200 ft to S and W lines.

Stephens County—Fred B. Foster's J. V. Gardner 2, T. P. Ry sur, 280 ft to S and W lines. Texas Pacific Coal & Oil Co.'s A. D. Howertz, T. P. Ry sur, 2310 ft to S and 330 ft to E line. Lewis Oil Co.'s C. T. Stroher 2, T. P. Ry sur, SW cor.

Throckmorton County—W. D. King et al's A. P. Broyles 1, TE&L sur, 1268 ft to NW cor.

Wichita County—Four States Oil Co.'s G. Jennings 19, HT&B Ry sur 450 ft to S and W lines; 13, 150 ft to W and 550 ft to N line; 18, 550 ft to N and 500 ft to W line. Electra Gulf Oil Co.'s Wm. Murray 4, H. B. Balch sur, 365 ft from No. 2. Maer & Staniforth's S. B. Burnett 2, S. R. Meade sur, sec 6, 300 ft E No. 1. Roberts & Hill's W. W. Overby 8, H. B. Balch sur, 150 ft to N line. Port Chester Oil Co.'s Donohoo 8, J. W. Robertson sur, 102 ft to W and 104 ft to S line. S. A. Cochran's A. J. Weeth Est. 1, S. P. Ry sur, 150 ft to N and E lines; J. E. Roller 5, Wm. Grady sur, 450 ft to W and 150 ft to S line. R. H. Cook's O. L. Throckmorton 1, J. F. Torrey sur, 150 ft to W and 500 ft to S line. Rubsam & Hunter's W. D. McClure 2, GC&SF Ry sur, 300 ft E No. 1. Gulf Prod. Co.'s S. B. Burnett 22, T&NO Ry sur, 175 ft to E and 150 ft to S line. Rio Bravo Oil Co.'s W. T. Waggoner A-15, sec 31, blk 5, 500 ft to S and 636 ft to E line; A-15-A, 50 ft SE A-15. R. T. Couch's J. W. Donohoo 4, J. W. Robertson sur, 150 ft E No. 3; 5, 150 ft E No. 2; 6, 150 W No. 1. J. H. Cotton & Co.'s Kemp & Kempner 3, W. V. F. L. sur, 340 ft W No. 2; 4, 300 ft W No. 3; 5, 300 ft W No. 4; 6, 300 ft W No. 5. Gulf Prod. Co.'s W. T. Waggoner J-2, HT&B Ry sur, 450 ft to N and 150 ft to E line. Grafa, Hampton & Bullington's J. E. Hobson 1. GC&SF Ry No. 2 sur, 150 ft to S and Wilness; R. L. Eads 1, E. M. Gillis, sur, 150 ft to N and E lines. Fresno Oil Co.'s J. W. Ferguson 1, J. Robertson sur, 150 ft to N and W lines.

Webb County—Andrews Pet. Co.'s Puig Bros. 1, A. De Arriba sur, 150 ft to S and E lines. C. G. Chandler's Ochoa 1, Ochoa sur, NW cor.

Wharton County—Gulf Prod. Co.'s Z. Felder et al 1, S. Ingram sur, S of No. 3.

LOUISIANA

Caddo Parish—Garnett Read's Burke 1, 7-21n-15w, 870 ft E and 450 ft S of NW corner of SW¼. Gulf Ref. Co.'s Ferry Lake 218, 22-20n-16w, 2050 ft E and 300 ft S of NW cor. Dixie Oil Co.'s Dillon 61, 13-21n-15w, 445 ft E and 1440 ft S of NW cor; Caddo Mineral Lands Co. 8, 23-21n-15w, 2775 ft W and 927 ft S of NE cor.

Calcasieu Parish—Vinton Pet. Co.'s Gray 47, 33-10s-12w, 316 ft W and 446 ft N of SE cor.

Evangeline Parish—Ville Platte Pet. Co.'s Andrus 1, 31-4s-2e, 1500 ft W and 300 ft S of NE cor.

Morehouse Parish—La Del Oil Properties' Feazel 1, 22-20n-5e, 1720 ft E and 660 ft S of NW cor.

Ouachita Parish—Ouachita Nat. Gas Co.'s Trezevant 3, 40-20n-2e, from the Easterly cor. of sec. 40, Due South 1770 ft and due West 4157 ft.

Union Parish—Dancinger Oil & Ref. Co.'s Cook 1, 12-20n-3e, 262 ft S and 757 ft E of NW cor.

Webster Parish—Standard Oil Co.'s McInnis 1, 22-21n-10w, 400 ft E and 340 ft S of NW cor of SW¼. The Ohio Oil Co.'s Holloways 1, 23-21n-10w, 2310 ft N and 2310 ft E of SW cor.

ARKANSAS

Ouachita County—Arkansas Drilling Co.'s Reynolds 2, 24-15-17, 200 ft N and W of SEc NW¼ SW¼. Herman & Jackson's Shirey 1, 36-15-17, 200 ft S and W of NEc NW¼ NW¼. R. B. Nelson's Jeffus 2, 26-15-17, 330 ft S and 150 ft E of NWc E½ NW¼ SE¼. Ramage et al's Jeffus 3 25-15-17, 200 ft N and E of SWc NW¼ SW¼. Staves et al's Jeffus 2, 26-15-17, 200 ft S and E of NWc NE¼ SE¼. Sutton et al's Minor 2, 20-15-16, 200 ft N and E of SWc SE¼ SE¼. Whittiken et al's Anderson 3, 23-15-17, 200 ft S and W of NEc SW¼ SE¼.

Union County—Arkansas Fuel Oil Co.'s Alphin 3, 11-16-15, 200 ft N and W of the SEc NE¼ SW¼. Crawford & Sebastian's Graves 4, 3-16-15, 200 ft N and E of SWc E½ SW¼ NE¼. Crosby Trust's Alphin 4, 29-15-16, 200 ft S and E of NWc of sec. Gulf Ref. Co.'s

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana and Texas

Number of New Wells for Week Ending

State—	Apr. 5	Apr. 12	Apr. 19	Apr. 26	May 3	May 10	May 17	May 24	May 31	June 7	June 14
Kansas	15	9	15	19	12	7	21	61	27	18	..
Oklahoma	101	108	144	126	62	149	71	80	124	68	61
Arkansas	37	56	45	71	37	74	57	35	99	36	22
Louisiana	11	19	8	20	8	17	12	16	13	13	11
Texas	142	203	173	125	215	174	142	192	162	117	104
Total	306	395	385	361	334	421	303	384	365	215	198

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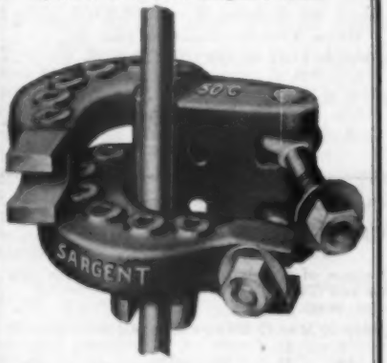
Polish Rod Double Grip
$25 F. O. B. Los Angeles, Calif.



Sargent Engineering Corporation

2535 East Fifty-sixth Street, Los Angeles, Calif. P. O. Box 181, Huntington Park Station. Phone Humboldt 6947-J

Werner 20, 6-16-16, 200 ft S and 1520 ft E of NWc of sec. Humble Oil & Ref. Co.'s Hicks 2, 20-16-15 150 ft N and W of SEc North 30 acres SW¼ SW¼. Imperial Oil Co.'s Smith 2, 29-17-14, 200 ft S and W of NEc of S½ SW¼ NW¼. Lion Oil & Ref. Co.'s Hedgewood 4, 24-16-16, 150 ft S and E of NWc of 20 acres in NW¼ NE¼. Rutledge et al's Hodges 1, 1-16-17, 200 ft S and E of NWc E½ SE¼ NE¼. J. Seip et al's Hedgewood 1, 24-16-16, 200 ft N and W of SEc NE¼ NW¼. Standard Oil Co.'s Lingelbach 8, 22-16-16, 330 ft N and W of SEc SE¼ NE¼. Sure Oil Corp.'s Smith 7, 24-16-16, in NWc NE¼ NE¼. The Texas Co.'s Hedgewood 3, 24-16-16, 200 ft N and W of SEc NE¼ SE¼; Hedgewood 4, 24-16-16, 200 ft N and E of SWc NE¼ SE¼. Unity Pet. Co.'s Alphin A-5, 24-16-16 200 ft S and E of NWc SE¼ SW¼. Wright et al's Hodges 2, 1-16-17, in NWc E½ SW¼ NE¼.

OKLAHOMA

Creek County—H. C. Wilson No. 2, center of the east line of the northwest of the northwest of 35-17-10. Damar Pet. Co.'s No. 4 Tiger, northeast corner of the southwest of the southeast of the southeast of 8-14-10. Donnelly et al No. 1, Johnson, center of the northeast of the southeast of the northwest of 17-14-10; No. 2, same farm, northeast corner of the southeast of the northwest of 17-14-10. M. Klay et al's No. 1, Montgomery, northwest corner of the southwest of the southwest of 21-15-9; Kelly et al No. 1, southwest corner of the northwest of the southeast of 4-16-9. Texas Pacific Coal & Oil Co., No. 1, Barnett, northwest corner of the northeast of the southeast of 6-16-9. Kiskaddon et al No. 1, Foster, northeast corner of the northwest of the northwest of 26-19-8 (old Bartlesville well drilling deeper).

Jefferson County—Tarkington & Kelsey No. 1 center of the northwest of the northeast of 21-5s-6w. Barber et al No. 1, Mayor, center of the southeast of the southeast of the southwest of 34-5s-6w. Ely et al No. 1, Brown, center of the southeast of the southeast of the northwest of 4-6s-5w. Humble Oil & Ref. Co., No. 1, Seay, center of the southwest of the southwest of the northeast of 29-6s-5w.

Kay County—Alcorn Oil Co., No. 1, school land, southeast corner of the southwest of 16-25-2w. Marland Ref. Co., No. 2, school land, southwest corner of the southeast of 16-25-2w; No. 1, same property, southeast corner of 16-25-2w. Carter Oil Co., No. 1, Turk, northeast corner of 21-25-2w; No. 2, same farm, northwest corner of the northeast of 21-25-2w. Twin State Oil Co., No. 1, Pichstein, northwest corner of 22-25-2w. McCaskey & Wentz No. 20, Welch, southwest corner of the northwest of the southeast of the southwest of 17-28-1e, (old well deepening).

Lincoln County—Texas Co., No. 2, Barber, southeast corner of the northeast of 11-14-6. Dowell et al's No. 2 Key West townsite, northwest quarter of 12-14-6. Wheeler & Webb No. 1, Key West townsite northwest quarter of 12-14-6; No. 2, same parties, same quarter section.

Noble County—Tidal Oil Co., No. 15, Neil, southeast quarter of 15-23-2w. Comar Oil Co. No. 5B, Blubaugh, northwest corner of the southeast of the northwest of the southeast of 2-24-1w.

Muskogee County—Jack Summers No. 1, J. H. Lewis, southeast corner of the northeast of the northeast of 12-15-15.

Okfusgee County—Cusack et al's No. 6, Hopwood, center of the south line of the northwest of the northeast of 11-11-11.

Okmulgee County—Carter Oil Co., No. 1, McQueen, center of the southeast of the southeast of the northeast of 35-10-12. Setter et al No. 1-A, Smith, southwest corner of the northwest of the northwest of 22-13-11. Tidal Oil Co., No. 1, southeast corner of the northwest of the southwest of 18-13-14. Lambert Oil & Gas Co., No. 6, Freeman, southeast corner of the northeast of the northeast of 7-13-15. Clover et al's No. 2, center of the east line of the southwest of the northwest of 3-15-11. Jackson & Wise No. 2, northeast corner of the southwest of the southwest of 3-15-11. Waite Phillips No. 1, southwest corner of the northwest of the southwest of 16-15-11. Farris & Potter No. 1-A, northeast corner of the southeast of the northeast of 18-15-12. Independent Oil & Gas Co., No. 8, center of the south line of the northwest of the northwest of 27-16-12.

Osage County—Carter Oil Co., No. 10, center of the northeast of the southwest of the southeast of 16-26-6. Peters Pet. Co., No. 2, center of the northwest of the southeast of the northwest of 17-27-6. Rex Oil Co., No. 6, Martin, southeast quarter of 20-21-8.

Pawnee County—Magnolia Pet. Co., No. 4, Baker, southwest corner of the northwest of 16-20-6. Prairie Oil & Gas Co., No. 3, Ham, northwest corner of the northwest of 15-20-7. Carter Oil Co., No. 9, center of the northwest of the southwest of the southeast of 16-20-6.

Payne County—Carter Oil Co., No. 1, Mosier, center of the southwest of the southeast of the northeast of 17-19-6.

Seminole County—Garland et al's No. 1, Winex, northwest corner of the northeast of the northwest of 6-6-8. Dixie Oil Co., No. 5, Foster, center of the southwest of the southeast of the southwest of 28-8-8. Dixie No. 4, Walker, center of the northwest of the northeast of the southeast of 29-8-8. Homaokla Oil Co., No. 2, Walker, center of the northeast of the northwest of the southeast of 29-8-8; No. 3, same farm, center of the northeast of the southwest of the southeast of 29-8-8.

Stephens County—Magnolia Pet. Co., No. 1, Worrell, northwest corner of 19-1s-8w. Fisher & Brannon No. 3, southwest corner of the southeast of the northeast of the northwest of 22-1s-8w. Grishy Oil Co., No. 1, Schick, southwest corner of the southeast of the northeast of 27-1s-8w. Four Star Oil Co., No. 1, Davidson, southeast quarter of 11-3s-8w. Magnolia Pet. Co., No. 7, Harris, northeast corner of the southeast of the northeast of 25-1n-9w. Magnolia No. 9, Harris, southwest corner of the northwest of the northeast of 25-1n-9w. Smith-Law No. 3, Brymer, center of the west line of the northeast of the northeast of 31-1n-8w.

Tulsa County—Superior Oil Corp., No. 2, northeast corner of the southeast of the southeast of 6-19-13. Posey Short et al's No. 1-A, center of the southwest of the southwest of 5-18-13. Newbough & Hansen No. 1, Simon, southeast corner of the southwest of the northwest of 11-18-13. Charles Page No. 2, Davis, northwest corner of the southeast of the northwest of 25-19-11. Shaffer Oil & Ref. Co., No. 5, northwest corner of the southwest of the northwest of the northwest of 4-19-12. Shaffer Oil & Ref. Co., No. 6, southeast corner of the northeast of the southwest of the northwest of 4-19-12. Simons et al's No. 2, southwest corner of the northeast of the northwest of 4-19-12. Charles Page No. 5, northeast corner of the northwest of 7-19-12.

Arkansas Fuel Officials On Tour of Mid-Continent

Pittsburgh, Pa., June 14.—A party of officials of the Arkansas Fuel Company headed by J. C. Trees and M. L. Benedum of Pittsburgh are on an inspection trip through the western oil country, including the Mid-Continent. The company owns properties in Kansas, Oklahoma, Texas, Louisiana and Arkansas.

The Arkansas Fuel Company is a subsidiary of the Arkansas Natural Gas Company of Pittsburgh.

28,000 Barrels Daily in Peru

Toronto, Ont., Canada, June 13.—Crude oil production of the International Petroleum Company in Peru now is approximately 28,000 barrels daily. International Petroleum is a subsidiary of Imperial Oil Ltd., controlled in turn by Standard Oil Company (New Jersey).

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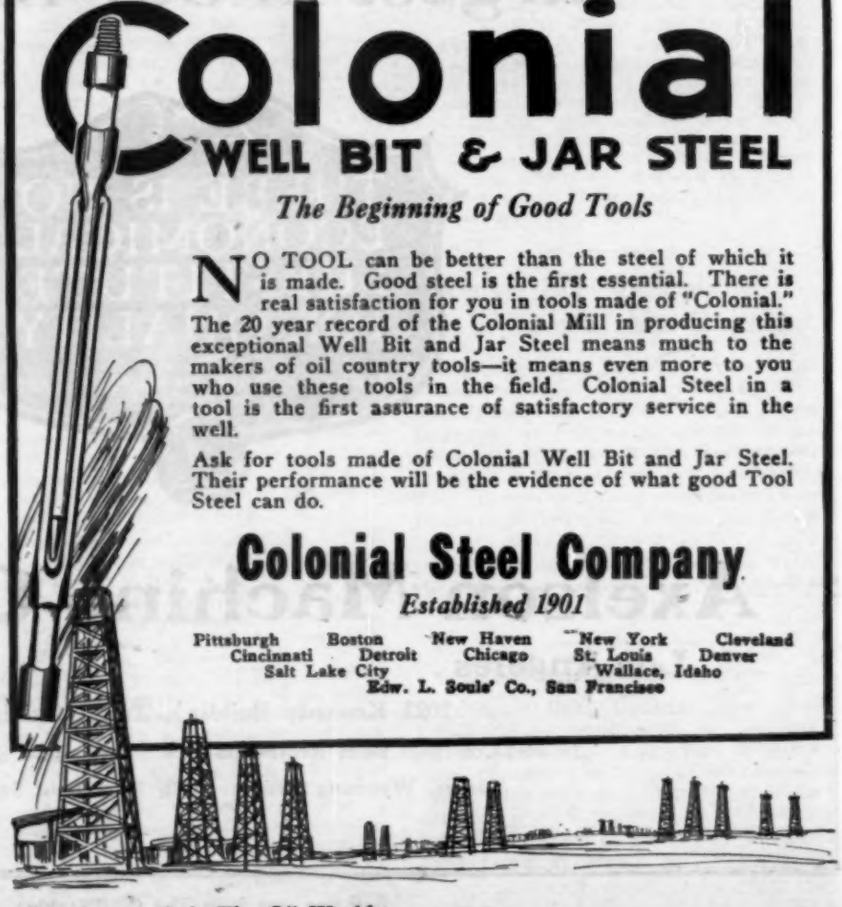

Say you saw it in The Oil Weekly

WILDCATS FROM ALL SECTIONS

Dry Holes Replaced by New Locations in Active Search for Oil in Central Texas Wildcat Area

Corsicana, Texas, June 16.—Wildcat operations in the East Central Texas fault region, extending in a general northeast direction across the state from the Corsicana-Powell field, continues active with about as many new tests being started as are given up as dry holes each week.

The most interesting test in the wildcat area is the Boyd Oil Company's second test on the East Bazette gas producing structure in the northeast part of Navarro County, as it is within close striking distance of the Woodbine sand, and is scheduled for completion within the next ten days. This test is located on the G. R. McGowan land, Morris Webb survey, or about 2800 feet south of the same company's completed gasser on the Conner-Rutherford land, R. D. Newman survey, and a noticeable difference prevails in the detphs of the formations logged by these two tests.

The McGowan test was drilling in shale below 2965 feet at last reports, after having logged the top of the Austin chalk at 2333 feet (s. l. m.) and passed out of the main body of chalk at 2717 feet. From this point shale formation was drilled to 2762 feet, where chalk was found to prevail to 2807 feet followed by another shale break before entering the last trace of chalk from 2823 to 2829 feet. The elevation on this test is reported to be 388.7 feet, while the gasser has an elevation of 343 feet and logged the Austin chalk from 2823 to 2829 feet. The elevation of 238 feet of chalk drilled. The thinness of the chalk formation in the gasser is said to be due to the fact that the well passed into the fault while drilling the chalk body. The top of the Woodbine sand in the completed gas well was reported at 2916 feet, with traces of oil at 2917-24 feet; 2968-74 feet and more at 2986-96 feet, while gas production put in its appearance below 3000 feet, and the well blew in with an initial flow of 9,000,000 cubic feet of dry gas at 3190 feet after drilling 274 feet of the Woodbine sand. The rock pressure on this gas production tested 700 pounds.

The Texas Company has joined the ranks of the East Central Texas wildcatters, and has made location for a deep test to be drilled 250 feet each way from the northwest corner of the M. F. Enix farm, J. Halle survey, or about two miles southeast of Brashear. In the same county the Bar-Tex Drilling Company have completed a rig for a deep test to be drilled 300 feet each way from the northwest corner of the C. H. McClure 33½-acre lease, D. Waggoner survey, or about four miles south of the town of Weaver. Both of these companies have large blocks of leases surrounding their proposed tests. In this same county deep dry holes have just been completed by Marland Oil Company, Skelly Oil Company, E. L. Smith Oil Company and Dreeben-Laskey and others.

Panhandle Production Area Extended by Texas Co.

Amarillo, Texas, June 16.—The oil producing area in the Carson-Hutchinson County section of the Panhandle district was extended one mile to the east last week when The Texas Company's S. B. Burnett Ranch 3, flowed at the rate of 20 barrels of oil per hour from two feet of sandy-lime pay at 3042 feet after being agitated for three-quarters of an hour with the swab. The performance of this well materially enhances the value of leases acquired recently by Gulf Production Company, American Refining Company, Jack Greenwood and others, Pure Oil Company and Marland Oil Company from the Burnett interests in a general southeast direction from the area proven for oil production in Carson County, and indicates that the trend of oil production to the east and southeast is yet to be determined.

Crude produced by this new well is reported to test about 37.5 gravity. The well is located 2702 feet north and 325 feet east of the southwest corner of the southwest quarter of section 108, I. & G. N. Survey, block 5, and was reported last week flowing about 15,000,000 cubic feet of dry gas from sandy-lime formation at 3030 to 3034 feet. This gas was cased off with a string of 6¼-inch casing set at 3037 feet, before the well was drilled into the oil pay. The casing seat failed to hold after the well had been allowed to flow about eight hours, and the well is now shut in to try and re-set the casing before restoring it to the active producing list.

This well is the third oil producer completed to date by the Texas Company on the S. B. Burnett ranch, Carson County, while three other tests are drilling. A 55,000 barrel storage tank erected early this year to store the production from the first two oil producers has been nearly filled, and it is expected that The Texas Company will shut in its wells unless more tankage is added, or some kind of a working agreement reached with the owners of the Plains Pipe Line Company, which is completing a four-inch line from the field to the town of Panhandle on the Santa Fe railroad.

A second line to serve the oil field is being constructed by Dorsett Carter in the name of Pan-Tex Pipe Line Company to the city of Amarillo, a distance of 45 miles. It will use six-inch pipe, and in all probabilities the crude will be handled by the Reese S. Allen refinery at Amarillo. It is reported that negotiations are underway to start operating this plant shortly.

Deepening Bill Lake Well Increases Flow

Fort Worth, Texas, June 16.—Deeper drilling on the Big Lake Oil Company's University No. 8, located 1200 feet due south of the Reagan County discovery well, has materially increased the oil production of the well, and it is credited with having flowed by heads 140 barrels during the first 24 hours. The well filled the hole about half full of oil after drilling sandy lime pay from 3032 to 3044½ feet several weeks ago and was later deepened 26 feet to a total depth of 3070 feet, resulting in the increased production and natural flow. This is the most recent producer to be added to the field, and gives promise of being the largest well when placed on the pump.

Since no completions have been made to date to the east of the Reagan County discovery well, considerable interest is being centered on the outcome of the Big Lake Oil Company's University Nos. 9 and 10, which are located east and northeast, respectively, and both are about ready for completion. University No. 9, which is located 1300 feet due east of No. 1, has been temporarily delayed at 2820 feet on account of a fishing job, while No. 10 is located in the northeast corner of section 2, block 2, and is changing from rotary to standard equipment after cementing 6⅝ casing at 2978 feet. This is the first attempt to introduce the rotary in the field.

Central West Texas Wildcats

COMPLETIONS

Company, Well, Location—	Initial Production Bbls.	Depth
Brown County—		
Infield Pet. Co. T. M. Windham 5..	30	2415
Joe Cullinan et al G. W. Pickett 1..	35	1298
Callahan County—		
C. O. Moore et al W. H. Ackers 6	*	2550
Anderson 2	*	2550
Pope, Wilson & Pennant Oil & Gas Co. W. B. Bryson 3.....	*	2505
Schaffner et al James 2.....	*	2555
Palo Pinto County—		
Harris et al Weldon 1.....	*	4365
Mitchell County—		
S. A. Sloan Oil Co. Sam Smart 4...	160	3005
Taylor County—		
Sanger Oil & Ref. Co. Hale 1.....	*	3655

DRILLING REPORT

BROWN COUNTY—M. T. Anderson et al's Wheeler 1, sd 900 ft. Chas. S. Avery's Cox 3, rig. Brownwood Prod. & Ref. Co.'s Williams 9, co after shot 60 qts, from 2460 to 2485 ft. Canyon Oil & Gas Co.'s J. W. Newton 2, dr 1300 ft. Carlton-Tippett's O. B. Fomby 1, sd 1315 ft. Gilliam et al's J. W. Newton 1, lcn.

Honea et al's E. DeBusk 2, sd 1675 ft. Leonard et al's Prather 2, sd 2370 ft. Maher Bros.' Bohara 1, showing oil dr in lime pay 2260 ft Mahlstedt Mook Oil Co.'s J. W. Newton 1, showing oil and gas 1251 ft. Mendenhall et al's Newton 1, dr 460 ft. McMurray et al's Newton 2, machine. Omaha Southern Oil Co.'s G. B. Gaines 2, sd 1690 ft. F. W. Stone & Co.'s Wright 1, dr 1360 ft.

CALLAHAN COUNTY — Byron-Union Oil Co.'s Hennessey 1, sd 4045 ft. Chas. Dutton et al's Carter 1, rig; Harwell 1, sd 480 ft; Cathey 4, dr 750 ft; Cathey 5, timbers; Cathey 6, rig; Cathey 7, rigging up. Dudley Oil & Gas Co.'s Hugh Moore 1, sd 1835 ft. H. C. Donohoo et al's W. M. Isenhower 3 lcn. Hickey et al's E. L. Findley 2, skidding rig, td 2710 ft. Kellog Drilling Co.'s Snyder 1, spudding. McBride et al's Isenhower 1, sd 435 ft. McCree et al's Isenhower 1, dr 1700 ft. Root & Rhodes' Kile 1, dr 1200 ft. Seaboard Oil & Gas Co.'s Isenhower 3-B, dr 1500 ft; Isenhower 4-B, dr 1100 ft. Shackelford et al's Chas. Allen 1, sd 1675 ft. John Sherrien et al's Cathey 3, dr 500 ft. Tidal Oil Co.'s Mrs. E. Cathey 3, dr 830 ft; Cathey 4, dr 130 ft.

COLEMAN COUNTY—W. A. Gray et al's Gray 5, sd 2480 ft. Roth & Farroth's M. T. Overall 8, sd 1365 ft. T. B. Slick et al's Y. Jonnson 1, dr 1240 ft.

PALO PINTO COUNTY—Gogwell et al's Wall 1, sd 905 ft. Cunningham et al's Holly 1, dr 700 ft. Pat Dalton et al's Dalton 1, dr 900 ft. Hughes & Craig's C. Dalton 1, lcn. McKinney et al's Marsden 1, dr 315 ft. Moore & Sneboldt's Boles 2, co after shot from 3045 to 3100 ft, td 3420 ft. S. W. Manning et al's R. Hitson 1, sd 3640 ft. Phillips & Graham's J. A. Caudill 1, sd 3520 ft. Republic Production Co.'s J. H. Robinson 1, dr 1545 ft. Strawn Coal Co.'s Fee 1, dr 580 ft. Scott & McCluer's River Bed 1, sd 3715 ft. H. L. Singleton et al's W. Holt 1, sd 4360 ft. B. H. Talbert et al's J. J. Thornton 1, dr 450 ft. Texas Pacific Coal & Oil Co.'s J. H. Robinson 11, co after shot 1530 ft; J. N. Stewart 146, lcn. Youkan Oil & Gas Co.'s Seaman 1, sd 3965 ft.

BORDEN COUNTY — Reeves-Parkhurst et al's A. J. Long 1, setting 15½-inch cas 155 ft.

BREWSTER COUNTY—Arco Development Co.'s H. L. Kokernot 1, setting cas 3775 ft. Brewster Oil Corp.'s W. H. Kokernot 1, sd 2515 ft. Portland Oil Synd.'s State 1, setting cas 3050 ft. Marathon Oil Co.'s Nigger Creek-Cage 1, sd 2685 ft. Nine Points Oil Co.'s Peralto et al 1, sd 1570 ft.

COKE COUNTY—Ace Oil Co.'s W. C. Locke 1, spd. and sd. Mexia-Equitable Oil Co.'s W. J. Hodges 1, sd 2505 ft.

CONCHO COUNTY—Dome Production Co.'s Mrs. C. M. Hartgrove 1, dr 1005 ft. Signal Oil Co.'s Sam Waring 1, sd 3203 ft. Schultz Oil Co.'s W. O. Schultz 1, sd 3225 ft.

CRANE COUNTY—Texas Development Co.'s Jack Cowden 1, dr 265 ft.

CROCKETT COUNTY—Levi Smith et al's University 1, sd 3165 ft. Crockett Drilling Synd.'s J. M. Shannon 1, sd 4270 ft; Shannon 2, lcn; Robt. Massey 1, dr 610 ft. Mid-Kansas & Transcontinental's Harris Bros. 1, fsh bit 2062 ft. Marathon Fold Drilling Club's L. P. Powell 1, dr 850 ft.

CULBERSON COUNTY — David Flood et al's McAlpine et al 2, lcn. J. D. Wesner et al's Mack Sayles 1, sd 3105 ft.

DAWSON COUNTY — Lamesa Oil Co.'s John Burns 1, sd 2155 ft.

ECTOR COUNTY — Farmers Oil & Gas Co.'s Andy Newham 2, sd 1400 ft.

EL PASO COUNTY—Burns & Knight's Fee 1, sd 4170 ft.

FISHER COUNTY—Pyron Oil Co.'s J. S. McCall 1, sd 3125 ft.

GARZA COUNTY—B. V. Blackwell et al's J. M. Boren 1, dr 1050 ft. Union Pet. Corp.'s Clyde C. Connell 1, rig.

GLASSCOCK COUNTY—Ledger Oil Corp. (was Associated Ref. & Prod. Co.)'s C. I. Brunson 1, dr 3100 ft. General Oil Co.'s L. S. McDowell 4, dry and abn 3685 ft. Cushing Ranch Drilling Assn's W. H. Sparkman 1, sd 1950 ft.

HUDSPETH COUNTY—Wm. Loftus et al's Minnie Veal Slaughter 1, sd 1820 ft. Boole Oil Assn's Gardner et al 1, sd 1540 ft. Hueco Basin Oil Co.'s University 1, sd 2560 ft.

HOWARD COUNTY—Big Springs Oil Co.'s Mable O. Quinn 1, sd 3640 ft.

JONES COUNTY—Anson Oil & Dev. Co.'s C. B. Brown 1, sd 1855 ft. C-H Oil Development Co.'s J. A. Cullom 1, fsh tools 3300 ft.

LOVING COUNTY—J. J. Wheat et al's N. E. Chapman 1 (rotary rig) dr 100 ft. Ramsey Prod. Co.'s Russell 1, sd 4485 ft; Russell 2, sd 810 ft.

MITCHELL COUNTY—The California Co.'s W. H. Abrams 1-DD (discovery well) co after shot 280 qts 2940-3050 ft; Abrams 6, bldg rig; W. H. Butler 1, swabbing and co 3275 ft; E. Morrison 1-A, dr 4895 ft; E. Morrison (lse. 5) 8, dr 1150 ft; Morrison 9, dr 250 ft; Morrison 10, rigging up; Morrison 11, rigging up; A. L. Miller 3, dr 1900 ft; Miller 4, dr 2150 ft. S. A. Sloan Oil Co.'s Sam Smart 5, fsh tools and co after shot, td 3030 ft. Chal Daniel et al's W. D. Kynard 1, rig. M. E. Eddleman et al's A. C. Gist 1, rig Morrison-Rowe Lease Synd.'s W. D. Kynard 1, bldg rig. Tidal Oil Co.'s J. J. Handley 1, dr 2125 ft. J. T. Harris et al's W. C. Brown 1, dk.

PECOS COUNTY—C. E. Menzie et al's Sherbino Brps. 1, lcn. Trans-Pecos Oil Co.'s Johnson-Troy 1, sd 2965 ft; H. L. Thomas 1, sd 785 ft; Bennett et al 1, sd 1245 ft; Turney 1, sd 2610 ft. Southern States Lease & Prod. Co.'s J. M. Odem 1, sd 1205 ft. Oregon-Texas Oil Co.'s Turney 1, sd 3520 ft.

PRESIDIO COUNTY—Claude Byler et al's Toole Estate 1, dr 865 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 2-DD, co bridge after shot 20 qts., from 3013 to 3028 ft, td 3115 ft; University 8, deepened to 3070 ft and flowing 140 bbls daily; University 9, fsh 2820 ft; University 10 (rotary equipped) cemented cas 2978 ft, std to drill in; University 11, dr 1525 ft. Mid-Kansas & Trans-

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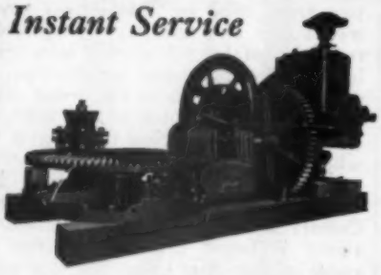

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continental's McIntosh 1, sd with hole full water, 3433 ft. Wm. Dunning & Humble Oil & Ref. Co.'s Sawyer Ranch 1, side tracking bit 1765 ft. Heury Riley et al's University 1, lcn. Texas Pacific Coal & Oil Co.'s R. A. Walters 1, dr 3175 ft. Texon Oil Land Co.'s University 1, (Sec. 1, Blk. 8) fsh tools 2200 ft; University 1, (sec. 22, blk 9) skidding rig, td 240 ft.

REEVES COUNTY — Dixieland Oil Co.'s Oates 2, sd 4505 ft. W. S. Troy et al's H. G. Hersheucen 1, sd 415 ft. Bell Reeves Oil Co.'s Findley et al 1, sd 1540 ft. El Paso-Saratosa Oil Co.'s Geo. Wirt 1, sd 540 ft. Parker-Hancock Oil Co.'s Johnson 1, sd 1930 ft. Willoughby Pet. Co.'s W. D. Cowan 1, sd 610 ft. Rodenbaugh & O'Connell's W. D. Casey 1, sd 845 ft. Pecos Pet. Co.'s Johnson 1, sd 1930 ft. Texas Drilling & Dev. Co.'s Pecos Valley 1, sd 1105 ft.

SCURRY COUNTY—Camp Springs Oil & Gas Co.'s L. E. Howell 1, lcn; W. R. Quinn 1, sd 3005 ft; W. V. Jones 1, sd 605 ft. Hermleigh Oil & Gas Co.'s J. W. Burris 1, sd 3005 ft. Stanton Oil & Gas Co.'s J. W. Riley 1, sd 3505 ft.

STERLING COUNTY — Chicago-Texas Oil & Gas Co.'s D. C. Durham 1, sd 1427 ft; Durham 2, lcn. Co-Operative Lease & Dev. Co.'s Douthitt 1, sd 1775 ft. Fidelity Oil Co.'s Hull 1, sd for cas 1640 ft. Concho River Drilling Assn.'s Geo. McIntyre 1, sd 500 ft.

TAYLOR COUNTY—Sanger Oil & Ref. Co.'s McClure 1, lcn; Tom Sawyer 1, sd for cas 2700 ft; Hollingshead 1, rig.

TERRELL COUNTY—Southwest Texas Oil Gas Co.'s S. W. T. No. 1, sd 3515 ft. Pittsburgh-Western Oil Co.'s Chas. Downey 1, sd 1260 ft.

TOM GREEN COUNTY — Ranger Investment Co.'s E. F. Russell 1, sd 1800 ft. Independent Operator's W. F. & W. E. Whitehead 1, sd 2200 ft. Hodge-Wright et al's Belle Moore Estate 1, sd 680 ft.

WARD COUNTY—Arthur Pitts Oil Co.'s Soda Lake 1, sd 2205 ft; River 1, sd 4675 ft. Cook & O'Brien's G. W. O'Brien 1, sd 1175 ft. Trans-Pecos Oil Co.'s Longnecker 1, sd 1765 ft.

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East Central Texas Wildcats

COMPLETIONS

Company, Well, Location— Navarro County—	Initial Production Bbls.	Depth
The Masters Oil Co.'s Easterling 1, (J. T. Chambers sur)	*	2560
Cranfill Bros. & Penn et al's W. G. Trammel 1, (H. S. Simonton sur)	*	3082

DRILLING REPORT

ANDERSON COUNTY—Roeser Pet. Co.'s J. D. Via 1 (Isaac Simpson sur), Austin chalk from 3440 to 3777 ft, running 5 3-16 cas to test gas at 4253 ft, td 4411 ft.

BOWIE COUNTY—Mission Oil Co.'s W. H. Nelson 1, (N. D. Headright sur.), lcn. Delaney Oil & Gas Co.'s Rochelle 1, (Collin-McKinney sur), sd 2290 ft; Rochelle 3, lcn. Hooks Oil & Gas Co.'s Lewis Forte 1, (J. Parkman sur), temp. abn 2400 ft. Wilcot Oil & Gas Co.'s Dr. Taylor 1, temp. abn 2855 ft.

DELTA COUNTY—J. C. McNeil et al's M. C. Patrick 1, (D. Hodges sur) sd 2750 ft.

FRANKLIN COUNTY—J. C. McNeil-Richardson et al's J. C. Harper 1, (J. S. Clift sur) dr 1200 ft.

FREESTONE COUNTY—Hall & Hodges et al's F. E. Gaddy 1, (H. Howard sur) top Austin chalk 2440 ft, sd for repairs in chalk 2730 ft.

HENDERSON COUNTY—Richardson Bros. et al's J. C. & E. R. Cade 1, (Southerland sur) dr 3325 ft. Fred Haynes et al's E. G. Bounds Ranch 1, (H. Jefferies sur) rig. Mutual Security Oil Co.'s Mrs. Browning 1, (Elijah Price sur) sd 3940 ft.

HOPKINS COUNTY—Marland Oil Co.'s J. T. Coopedge 1, (N. Hamilton sur) sd 3860 ft. E. L. Smith Oil Co.'s Pippin 1, (Thomas Haskins sur) sd 3605 ft. Skelly Oil Co.'s J. M. McGowan 1, (S. Tunnage sur) sd in hard lime, 3730 ft. Dreeben & Laskey's Patterson 1, (Henry Russell sur) sd 3217 ft. Kelsey et al's Addie Brooks 1, (D. Dowdle sur) rigged up and sd. S. P. Borden-Allison et al's W. A. Smith 1, (Eliza Mitchell sur) dk. Bar-Tex Drilling Co.'s C. H. McClure 1, (D. Waggoner sur) dk. The Texas Co.'s M. F. Enix 1, (J. Halle sur) lcn.

HUNT COUNTY—Gulf Production Co.'s J. C. George 1, (E. Tidwell sur) lcn. Sam Tullal & Kelsey et al's J. W. Barnett 1, (Alex Smith sur) rig. Harlow Bros. et al's McDaniel 1, sd 925 ft.

KAUFMAN COUNTY—Pure Oil Co.'s (was Skinner-Lyles & Atlantic) Barrow Bros. 1, (R. A. Terrell sur) dr gumbo 3485 ft. Kelsey & Jackson's Watkins 1, co 2200 ft. Judge Germany et al's W. S. Kirby 1, (S. Edens sur) sd for drill stem 2896 ft.

NAVARRO COUNTY—Boyd Oil Co.'s G. R. McGowan 1, (Morris Webb sur) top Austin chalk, 2333 ft and out at 2717 ft, broken chalk from 2762 to 2807 ft and from 2823 to 2829 ft, dr in shale 2965 ft. Gilbert Johnson et al's L. Skiles 1, (D. R. Mitchell sur) Austin chalk from 2710 to 3170 ft, testing sand 3200 ft. Alex Patrick & A. G. Ilseng's W. L. Roberts 1, (Jos. Mayor sur) spudding. Webster & Pickens' Guy M. Gibson 1, (J. Fontenoy sur) Austin chalk from 2770 to 3165 ft, sd for cas to test gas at 3670 ft.

RAINS COUNTY—Lyles-McLaughlin & Atlantic Oil Prod. Co.'s J. T. Dowell 1, (J. W. McMann sur) dr 1900 ft.

RED RIVER COUNTY—Johnson Pet. Co.'s Lady Alice 1, sd for cas 2740 ft.

TITUS COUNTY—Magnolia Pet. Co.'s Geo. Antone 1, (M. V. Delgado sur) moving in materials.

VAN ZANDT COUNTY—Mills Bennett & Van Zandt Oil & Gas Co.'s C. R. Edgar 1, (J. N. Holt sur) dr in chalk 3350 ft. Brookins-Jenkins & Sun Oil Co.'s R. P. Hughes 1, (E. Alvarado sur) Austin chalk from 2150 to 2790 ft, dr in gumbo 3360 ft. Terrell Oil Co.'s J. T. Dunbar 1, (Van Sickle sur) showed oil in chalk at 2412 ft, sd 2640 ft.

WOOD COUNTY—Golden Oil Co.'s J. D. Adrian 1, (Hallmark sur) sd 1500 ft.

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pay for themselves in saving of casing threads alone. TIFOCO material and workmanship assure a life double that of ordinary hooks. Specially designed lubrication system keeps moving parts in generous bath of oil at all times, and yet requires little attention. A double-swiveling spring hook, a non-swiveling spring hook and a non-rotating rigid hook all included in one design.

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Size Inches	Weight Lbs.	Capacity
2¾	350	29,450
3	500	42,400
3½	570	57,726
4	1000	75,396
4½	1100	95,500
5	1750	117,810
5½	1850	142,548
6	2050	169,644
6½	2100	199,098
7	2400	230,910
7½	2500	265,074
8	2800	301,590

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Say you saw it in The Oil Weekly

North Texas Wildcats

COMPLETIONS

Company, Well, Location—		Initial Production Bbls.	Depth
Baylor County—			
Sunshine State Oil & Ref. Co.'s Mrs. E. S. Wallace 1	*		2010
Throckmorton County—			
Devine et al's Mrs. T. R. Richards 1	*		1205
Hale Tex Oil Co.'s J. H. Lee 1	*		965

DRILLING REPORT

NOTE—This report does not include tests that have been shut down indefinitely.)

BAYLOR COUNTY — Batchelder & King's Mrs. E. S. Wallace 1, dk. Crittenden et al's J. B. Coffee 1, dr 980 ft. Hapgood & Anderson's J. H. Turbeville 1, sd 1620 ft. Independent Oil Co.'s Robertson County School land 1, dr 1100 ft. C. B. Jetter et al's F. Gatzki 1, sd 700 ft. Magnolia Petroleum Co.'s W. B. Mills 1, dr 1270 ft. D. H. Moore et al's H. H. Fancher 1, sd 50 ft. Staley & Ramming's T. W. Parker 1, dr 1300 ft. Sun Oil Co.'s W. B. Mills 1, dk.

CLAY COUNTY — J. T. Cumley's J. D. Stine 1, standardizing, td 1780 ft. Crude Oil Producing Co.'s Kinder 1, sd 1060 ft. E. C. D'Yarmett's O. Bullington 1, dr 1280 ft. L. R. Dixon et al's R. H. Godfrey 1, dr 800 ft. Gulf Production Co.'s C. M. Worsham 4, dr 550 ft. Lone Star Gas Co.'s Panhandle Oil Co. 8, sd 1640 ft. Nebraska Oil & Gas Co.'s W. H. Myers 1, pumping to test td 3360 ft. Scaling Oil Corp.'s Geo. Scaling 1, dr 2050 ft.

COOKE COUNTY—Big Indian Oil Co.'s B. W. Davis 1, dr plug, td 3446 ft. Red River Drilling Co.'s Whaley Jones 1, fsh 1300 ft.

DENTON COUNTY—Big Indian Oil Co.'s K. Fortenberry 1, sd 200 ft. Hill Crest Oil & Development Co.'s J. H. Rayzor 1, sd 1350 ft.

FOARD COUNTY — Landreth Production Co.'s F. Halsell 1, fsh 2200 ft.

GARZA COUNTY—B. V. Blackwell's J. M. Boren 1, dr 1100 ft.

GRAYSON COUNTY—Zee Tex Oil & Dev. Co.'s G. W. Cannon 2, sd 3000 ft; Griffin 1, sd 2325 ft. W. R. Shankle et al's J. Marshall 1, dk.

HASKELL COUNTY—J. O. Galloway et al's F. S. Quade 1, sd 50 ft.

KING COUNTY — Banks Oil Co.'s J. R. Hailey 1, sd 1630 ft.

KNOX COUNTY—Brazos Bend Oil Co.'s J. E. Clark 1, sd 2000 ft. White Oil Corp.'s Ward Ranch 1, sd 2815 ft.

MONTAGUE COUNTY — Bowie Chief Oil Co.'s C. H. Boedeker 1, sd 2725 ft. Boyd Oil Co.'s Mrs. M. H. Salmon 1, dr 860 ft. Mascho Oil Co.'s J. L. Howard 1, sd 3510 ft. Texon Oil Co.'s L. Crenshaw 1-B, sd 1250 ft.

THROCKMORTON COUNTY—Ashcraft et al's Polk Co. Sch. Land 1, dr 1350 ft. Graves & Burton's Reynolds Cattle Co. 1, dr 680 ft. Hale Tex Oil Co.'s O. J. Woods 2, sd 475 ft; Wm. Elliott 1, dr 615 ft. King et al's A. P. Broiles 1, dr 250 ft. Larkin et al's H. E. Conger 1, dr 810 ft. Maer & Staniforth's W. H. Portwood 1, dr 1200 ft. Shamrock Oil Co.'s Mrs. A. McKnight 1, dk. W. A. Whatley's E. T. Parrott 1, sd 450 ft; C. P. Todd 1, dr 270 ft. Young et al's Reynolds Cattle Co. 1, dr 300 ft.

WILBARGER COUNTY—Geo. Church's W. B. Dill 1, sd td 1258 ft, good for approximately 15,000,000 cubic ft gas. Noble Oil Co.'s W. T. Waggoner 1, dr 1500 ft. Pigg et al's W. H. Davis 1, dr 350 ft. South Vernon Oil Co.'s G. W. Richardson 1, fsh 1250 ft. Wells & Guiberson's A. B. Wharton 1, set cas 1100 ft.

Texas Panhandle Wildcats

COMPLETION

Company, Well, Location—		Initial Production Bbls.	Depth
Hutchinson County—			
Watchorn Oil Co.'s Cable 1	*		3500

DRILLING REPORT

(NOTE—The drilling report below does not show wells that are shut down indefinitely.)

CARSON COUNTY — American Refining Co.'s S. B. Burnett 1, fsh 2775 ft; S. B. Burnett 2, dr 2305 ft. Culbertson Bros.' V. B. Armstrong 1, dr 1500 ft. Danciger Oil Co.'s S. B. Burnett 1, rigged up. J. Greenwood et al's Burnett 1, cas stuck, td 200 ft. Gulf Production Co.'s S. B. Burnett 4, dr 200 ft. W. W. Silk et al's S. B. Burnett 3, fsh 2900 ft. Skelly Oil Co.'s Burnett 1, lcn. The Texas Co.'s Mary C. Burnett 1, sd 2700 ft; Mary C. Burnett 2, fsh 2724 ft; S. B. Burnett 3, dr sand 3040 ft; S. B. Burnett 4, dr 260 ft. W. T. Waggoner's McConnell 1, sd 3110 ft.

CHILDRESS COUNTY — Anderson et al's Givens 1, dr 2950 ft.

COTTLE COUNTY—T. J. Woodley's A. C. Dulaney 1, sr 1600 ft.

GRAY COUNTY—W. H. Holmes et al's J. S. Morse 1, ur 3010 ft. The Texas Co.'s G. H. Saunders 1, straightening hole 2725 ft. Wilcox Oil Co.'s Combs & Worley 1, standardizing td 2810 ft; J. H. Wilson 1, rigging up.

HUTCHINSON COUNTY—R. E. Barnum's Johnson Bros. 1, dr 2770 ft. Gulf Production Co.'s E. Cockrell 1, rigging up; J. A. Whittenberg 1, dr 100 ft. H. T. McGee et al's Smith Capers 1, sd 3185 ft. Panhandle Ref. Co.'s J. J. Perkins 1, lcn. Plains Oil Co.'s J. F. Weatherly 1, co 3275 ft. Prairie Oil & Gas Co.'s G. W. Deahl 1, rigging up. Producers & Refiners Co.'s L. Bivens 1-B, sd 2650 ft, 75 million gasser. Tex-O-Oil Co.'s Johnson 1, rigging up. Twin Six Oil Co.'s W. L. Kingland 1, dk. Western Enterprise Oil Co.'s Smith Capers 1, rig burned, td 1100 ft. Wilson et al's Whittenberg 1, dr 2370 ft, making approx. 25,000,000 ft gas.

MOORE COUNTY — Producers & Refiners Co.'s Masterson 1 straightening hole, td 1950 ft.

POTTER COUNTY—Amarillo Oil Co.'s J.

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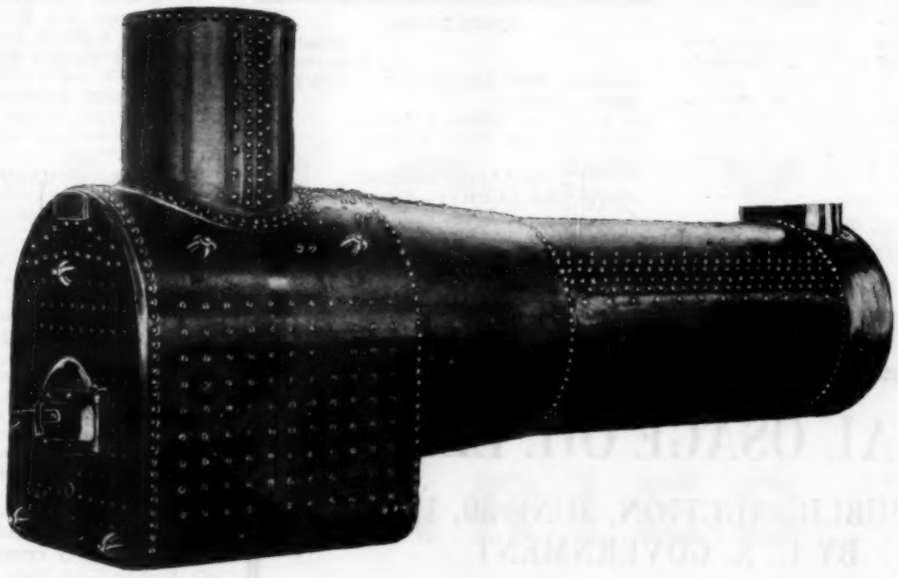

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C. Warrick 1, dk. Producers & Refiners Co.'s L. Bivens 1-A, dr by cas 3260 ft; Bivens 2-A, fsh 2580 ft.

ROBERTS COUNTY—Big Bend Oil Co.'s P. C. Ledrick 1, dr 75 ft.

WHEELER COUNTY — Mid-Continent Oil Synd.'s Ember 1, sd 330 ft. W. D. Shedden's B. F. Westmoreland 1, dr 400 ft. H. C. Tyrell et al's F. E. Sheldon 1, dr 2050 ft. Union Petroleum & Supply Co.'s O. T. Nicholson 1, dr 300 ft. J. Whittington's Williams & Laycock 1, fsh cas, td 2060 ft. E. L. Woodley's D. S. Bowers 1, dr 1355 ft.

Kansas Production Tax Advocated

Topeka, Kan., June 17.—Harry B. Burton of Kansas City, Kansas, democratic candidate for governor of the Sunflower State, is advocating a 3 per cent gross production tax on crude oil.

Coastal Wildcats

COMPLETION

Company, Well, Location	Initial Production Bbls.	Depth
Harris County—		
The Texas Co.'s Allum 1, between Blue Ridge and Pierce Junction..	*	1618

DRILLING REPORT

ANGELINA COUNTY—Paggi Bros.' Henderson-Hunt 1, about 12 miles east of Lufkin, resumed dr at 300 ft.

AUSTIN COUNTY — W. W. Johnson and H. R. Carroll's San Felipe De Austin Townsite Outlot 16, dr around 2025 ft.

BRAZORIA COUNTY—Associated Oil Co.'s Perry 1, 2 miles east of Clute, dr around 4320 ft. Sinclair Oil & Gas Co.'s Perry 1, at Stratton Ridge, moving in rig. Quick Dev. Synd.'s Boggs 1, Stratton Ridge, sd at 4350 ft.

CHAMBERS COUNTY—The Kirby Petroleum Company and Mills-Bennett's Amanda-McKinney 1, southeast side of Barbers Hill, dk. The Texas Company's Kirby Petroleum Company 1, 1 mile east of Barbers Hill, rigging up.

FORT BEND COUNTY — Pathfinder Oil Company's Davis Trustee 1, 7 miles northeast of Damon Mound, sd at 1000 ft; 2, sd at 600 ft; 3, dr at 700 ft.

GONZALES COUNTY — Bryan & James' Billings 1, southeast corner of the Peter Winn league, near Smiley, sd at 3000 ft.

GRIMES COUNTY—Day & Cuthrell's Cuthrell 2, O'Connor sur, dr at 2825 ft. Terry Development Co.'s Upchurch 1, 4½ miles north of Singleton, sd. Cobb-Rasmursen's Dodd 1, Timothy Jones league, sd 3500 ft, 2, dk.

HARRIS COUNTY—Texas Exploration Co.'s Warren 17, at Hockley, bailing at 2960 ft; Warren 19, dr below 200 ft. The Texas Co.'s Dopslauf 1, at Addricks, dr at 780 ft. The Dome Development and Pet. Co.'s Chachere 1, at Piney Point, sd below 700 ft; Schneider 1, dk. Trinity Mining & Copper Co.'s Mueschke 1, Wm. Koihn sur, at West Field, sd at 2200 ft.

LIBERTY COUNTY — Quick Dev. Synd.'s Peeler 3, at Fairchild Hill, sd at 3003 ft.

SAN JACINTO COUNTY—B. E. Jones et al's Bledsoe 1, 1¼ miles south of Shepard, sd.

Harrison County Well Showing Gas and Oil

Waskom, Texas, June 15.—Fuller & Scott are said to be preparing to set a string of 4½-inch casing to shut off a split in the six-inch in their No. 1 Furrh, located just west of the Louisiana state line, in Harrison County, in which a spay of oil and about two million cubic feet of gas was encountered last week at a total depth of 2397 feet.

Mexican Strike Ends

Mexico City, Mex., June 13.—Settlement of the prolonged strike of workers of the El Aquila Company in the Tampico district has been brought about. The strike was one of the longest and most bitterly contested in Mexican labor history.

TRIBAL OSAGE OIL LEASES

AT PUBLIC AUCTION, JUNE 30, 1924, BY U. S. GOVERNMENT

June 30, 1924, at Pawhuska, Oklahoma, about 20,000 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in 3 annual installments, with acceptable security. Within advertised area there are about 8,970 oil wells producing from 1 barrel to 4,000 barrels each, the total daily production for April, 1924, being about 114,000 barrels; also, there are about 328 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for 50 cents each, also logs of producing oil or gas wells for 25 cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs, or other information.

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San Antonio District Wildcats

COMPLETION

Company, Well, Location—	Initial Production Bbls.	Depth
McMullen County—		
Three Rivers Oil Co.'s Stitz 1.....	100	....

DRILLING REPORT

ATASCOSA COUNTY—DeLange-Eiser Co.'s Tom 2, fsh 3004 ft.

DUVAL COUNTY—Union Sulphur Co.'s Tinney 1, dr below 600 ft. Cain & Smith's No. 2, lcn. Iowa-Texas-Oklahoma Synd.'s Peters 1, sur. 789, sd 2000 ft. Mesquite Oil Co.'s No. 2, resumed operations.

JIM HOGG COUNTY—Miami-Balderas Oil Co.'s No. 1, dr. Diamond S. Oil Co.'s Doering 1, dr. Homer & Tyson's Tyson 1, Sur. 230, testing sand at 1500 ft; 2, lcn. Henne-Winch-Farris' No. 1, blk 3, Sur. 236, setting casing at 1943 ft. Shasta Oil Co.'s Holbein 3, dr below 3100 ft. J. W. Pippin's No. 1, Sur. 51, preparing to set casing and test.

LIVE OAK COUNTY — Grubstake Investment Assn.'s J. M. Nichols 3, dr. Lobo Oil Co.'s Reagan 6, sd 1000 ft. McCoy's Rose Murray 3, lcn.

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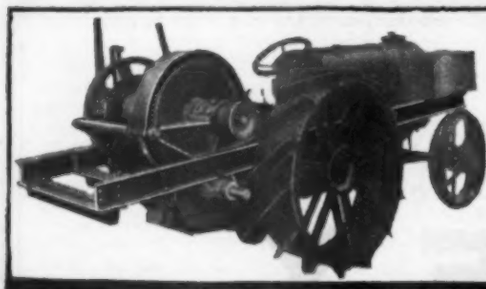

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McMULLEN COUNTY—Pioneer Prod. Co.'s Lowe 1, dr. San Balt Pet. Co.'s No. 6, dr below 200 ft. Scharbauer & Head's Fisher 5, r to set 6¾-inch casing. L. T. Stephenson et al's Stitz 1, set casing at 680 ft. Southern Natural Gas Co.'s Lark 6, had blow out at 1000 ft. Paul Sanley's No. 1 Stitz, dr below 1000 ft. Coquet et al's Hicks 1, dr 100 ft. Pioneer Consolidated Pet. Co.'s Martin 1, dr. Kepley, Carl & Anglin's Welsch 1, rigging up. Grubstake Investment Assn.'s Lark 5, dr 720 ft; Jacobs 3, rigging up; J. T. Calliham 3, cemented 8 ft. with 12½-inch casing; Calliham 2, dr. Bower Leasing Synd.'s Fisher 1, oil showing at 750 ft. Walsh et al's Brown 1, dr. Wilkerson-Lightfoot Co.'s 6, rigging up. Three Rivers Oil Co.'s Glass 1 and 2, lcns.; Calliham 4, dr 250 ft; Stitz 2, spudded in. Laughter & Napier's Stitz 1 dr. George Pickett's Jacob 1, setting casing. Finnell's Byrne 1, sd 900 ft. Lightfoot & Co.'s Lark 1, coring at 700 ft. D. C. & M. C. Synd.'s Lowe Ranch 2, oil showing at 630 ft. Watkins-Hill's Lark 1, r to 1000 ft. M. S. Holliday's Stitz 1, sd. Art Inglis' Fisher 2, setting liner at 700 ft. Everett & Adams' John Stitz 1, coring at 1054 ft.

ZAPATA COUNTY—H. J. McMullen's Serapio Vela 1, 2 and 3, lcns. Boston-Mirando Oil Co.'s 1, Sur. 69, preparing to clean well. Hill-Pierce Oil Corp.'s 1, rigging up. Mirando Oil Co.'s 13, Sur. 307, dr below 1400 ft.

Northeast Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Bowie County—		
Hooks Oil & Gas Co.'s Forte 1.....	*	2175
Cass County—		
Mid-CContinent Oil Lease Corp.'s M. Stats 1	*	3206

DRILLING REPORT

BOWIE COUNTY—Fitzhugh et al's Rochelle 1, cmt 6-inch casing at 2146 ft; Perkins 1, sd at 2032 ft. Tri State Oil Co.'s Taylor 1, fsh at 2900 ft.

CASS COUNTY—R. H. Allison's C. T. Wood 1, dr below 100 ft. Hughes Springs Snd.'s Stoval 1, sd at 2703 ft. Queen City Oil & Gas Co.'s Allday & Richie 1, tested salt water at 1721 ft; plugged back to 820 ft, fresh water well.

HARRISON COUNTY — Fuller & Scott's Furrh 1 cmtd 6-inch casing at 2127 ft.

MARION COUNTY—McCormick et al's McCay 1, dk. Wenzell et al's Stallcup 1, sd at 2710 ft

PANOLA COUNTY—Magnolia Pet. Co.'s Carrie G. Steel 8, dr at 1894 ft; Lawless 1, dk; Anderson Estate 1, dr below 3428 ft. Morris Trustee's Horton 1, lcn.

SABINE COUNTY—Deering et al's Harris 1, sd at 2600 ft.

SAN AUGUSTINE COUNTY — Snell & Stratford's Flournoy 1, dr below 815 ft.

SHELBY COUNTY—"We Win" Oil Co.'s Ashbury 1, sd at 1937 ft; 2, fsh, 2471 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's No. 1, NWc SW NE 33-30-14w, dr 3610 ft; Elsa 1, SWc 27-32-14w, rig.

BARTON COUNTY — Cheyenne Oil Co.'s Sooy 1, SWc SW 27-18-12w, sd 3525 ft. Haynes et al's No. 1, NWc 31-18-12w sd 1060 ft. H. W. Nieswanger's Wriker 1, SW SE 2-19-12w, sd 1103 ft. Mountain States O. & G. Co.'s No. 1, SEc NE 22-18-13w, dr 3010 ft. Jasper & Becahka's Schauf 1, SEc NW 11-16-12w, dr 3510 ft. Huffine et al's Smith 1, C NE SE NE 17-19-11w, fsh 1570 ft. Streeter & Stearns' Brown 1, NEc SW 21-19-12w, dr 2410 ft.

COFFEE COUNTY—Sunbeam Pet. Co.'s Andrews 1, NWc NE 33-20-15, rig. Thad O'Day's Allen 1, NWc SE 13-21-15, sd 900 ft.

CLOUD COUNTY—Livingston et al's Murdock 1, NEc 7-6-4w, sd 365 ft.

GEARY COUNTY—Liberty-Texas Oil Co.'s

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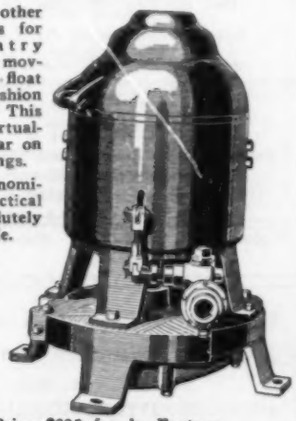

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Wright 1, NEc 9-12-6, sd 750 ft; Foster 1, NEc SW 30-13-6, sd 2000 ft.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-30, fsh 2890 ft.

GOVE COUNTY—Keys Bros. & Marine's Unknown 1, NWc SE 2-11-26w, lcn; Unknown 1, NWc SW 23-13-26w, lcn.

JEFFERSON COUNTY — Northern Counties' Edwards 1, SEc NW NW 13-9-19, fsh 3400 ft.

KINGMAN COUNTY—Hale et al's Garner 1, SWc NW 34-27-7, sd 2543 ft.

LINCOLN COUNTY—Trees Oil Co.'s Kohler 1, SEc 36-11-10w, r 2700 ft. Amerada Pet. Corp.'s Crawford 1, NEc SW SE 16-11-7, spd; Jellison 1, NWc SE 19-13-9, spd and sd.

OSBORNE COUNTY—Liggett et al's Worley 1, NWc NW 34-10-15w, dr 2710 ft. Delhi Oil Co.'s Forman 1, SWc SW 30-10-11w, co 250 ft.

OSAGE COUNTY — Rodgers & Bittle's Bertha 1, SEc NW 22-17-16, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Moyer et al's Williams 1, NEc SW NW 12-18-14, rig. Shade-Smith & Page's No. 1, SEc SW SW 16-18-17, r 1450 ft.

POTTOWOTOMIE COUNTY—Crawford et al's Stewart 1, C E L SE SE SE 17-9-12, rig; Greischabert 1, SWc SE SE SW 31-9-12, rig; St. Marys 1, SWc 11-1-12, sd 2290 ft.

RICE COUNTY—H. T. Proctor's Taylor 1, NWc 15-21-10w, spd and sd. Rino Oil Co.'s Dees 1, SEc SW NW 35-19-6w, dr 2875 ft. Emerson Casey's Bush 1, NEc 7-20-6w, co 2830 ft. Stanley et al's Barnes 1, SEc NE 21-20-6w, rig.

RILEY COUNTY—Richie et al's Boyle 1, SEc 36-7-4, sd 2601 ft. Walton Oil Co.'s No. 1, NWc 20-10-12, sd 1600 ft. Pawnee Oil Co.'s Marks 1, SWc NE NW 26-10-6, sd 1700 ft.

RUSSELL COUNTY — Valerius O. & G. Co.'s Munsell 1, NWc NE 17-12-15w, r 2520 ft; Phillips 1, SWc 3-13-13w, dr 3240 ft; Oswalt 2, SEc SW 8-12-15w, dr 2935 ft; Fairchild 1, SWc NE 36-12-13w, spd. Merriam et al's Murphy 1, C SW 11-12-12w, fsh 2390 ft. Streeter & Stearns et al's Oswalt 1, SEc SW SW 8-12-15w. P. & R. Corp.'s Haise 1, NWc SE 24-12-15w, dr 1300 ft. Patton et al's Walbridge 1, SWc NE 4-13-13w, dr 530 ft. Merriam & Findeiss ½ Sutter's Milke 1, SWc SE SW 20-12-15w, fsh 2670 ft. Hames, Findeiss & Stearns' Dodge 1, SEc SW SW 29-11-15w, dr 2195 ft. Pomeroy et al's Cooper 1, SEc 33-12-11w, spd. C. E. Suppes et al's Miller 1, SWc 25-12-12w, lcn. Alcorn Oil Co.'s Seller 1, SEc 36-15-13w, dr 350 ft. J. Garfield Buel's Diessroth 1, SEc NE SW 1-14-11w, rig.

SEWARD COUNTY—C. T. Dev. Co.'s Woods 1, NWc SE 34-34-34, sd 700 ft. Seward O. & G. Co.'s Sealey 1, NEc NW 20-33-33, sd 2427 ft.

SUMNER COUNTY — Champlin Ref. Co.'s Haskett 1, SEc 34-10-1w, dr 2250 ft.

TREGO COUNTY—Merton et al's Kyser 1, C E½ 9-11-22w, fsh 1406 ft. Keyes Pet. Co.'s Walsh 1, NWc SE 5-11-25w, sd 1700 ft; Walsh 2, SWc NE SW 5-11-25w, sd 1550 ft.

WASHINGTON COUNTY—Barnes O. & G. Co.'s Wickham 1, SEc SW 9-5-5, dr 1360 ft.

WOODSON COUNTY — Equity Oil Co.'s Soloman 1, SWc NE NW 30-26-17, sd 3200 ft. Peeless Oil & Ref. Co.'s Hessler 7, NWc SE NW 23-23-13, fsh 1400 ft.

Oklahoma Wildcats

ALFALFA COUNTY — McGinnis & Wards, Watts 1, C NE SW SE 21-27-10w, fsh 2920 ft. Armstrong, Henley & Piffles' Turnbull 1, C NW SE NW 23-24-11w, sd 50 ft. Haley, Barnes & Pulse's Joe Guinn 1, C NE SE 15-24-9w, sd 3445 ft.

ATOKA COUNTY—McPhearson et al's Wild 1 SWc NW 7-2-9, sd 1350 ft. Henson et al's Dabney 1, C SE NW 17-4-11, set 12-inch 1164 ft. J. F. Torrence et al's Fee 1, SWc NE 1-2-9, sd 1350 ft. Wapanucka Dev. Co.'s Underwood 1, C W L SE SE 28-2-9, sd 1700 ft.

BECKHAM COUNTY — Bollion Oil Co.'s Green 1, SW SW 34-10-24w, sd 1360 ft. J. A. Pringle's Burkholder 1, C NE NE 6-9-24w, sd 2750 ft.

BLAINE COUNTY—Thompson et al's Dickerman 1, C SE SE SE 26-15-12w, sd 3213 ft. Meyers et al's Chronister 1, SEc NW NE 7-18-16w, sd 965 ft. Okomo Drilling Co.'s Edelmeyer 1, SWc 21-15-10w, dr 2595 ft.

BRYAN COUNTY—Lyons et al's Coombs 1 SEc SW NW NE 11-8-9, sd 400 ft. Berlieu et al's Ramsey 1, NWc NE NE 32-7-8, sd 2475 ft. Alexander's Hampton 1, SEc NE 26-7-11, sd 500 ft.

CLEVELAND COUNTY—Garr Oil Co.'s Holland 1, NEc SE 31-10-4, sd 2620 ft. Furman Oil Co.'s Hager 1, NEc NW 23-10-1w, rig.

CUSTER COUNTY—Hoover Oil Co.'s No. 1, NWc SE 34-13-14, sd 2510 ft.

COAL COUNTY—Basie Oil Co.'s Heck 1, SEc 18-2-9, rig. Bearman et al's Payte 1, SWc NW NE 32-2-9, fsh 2780 ft. Guy Vaughn's Nichols 1, SWc 1-1-11, rig. McPhearson's Jamison 1, NWc NE NE SW 24-1-8, sd 300 ft. Empire Companies' Walker 1, C SE SE 4-2-9, dr 1100 ft.

GRANT COUNTY—Embry et al's Edwards 1, C SE SE NW 20-26-4w, sd 1000 ft. Day Oil Co.'s Vandatta 1, SWc NW 8-26-2w, r 1660 ft. Midwest & Gulf's Moon 1, NEc NW 8-27-8w, sd 2010 ft. Frank Travers et al's Fuss 1, SWc NW NW 30-27-4, dr 740 ft.

GREER COUNTY—Western Nat. Gas Co.'s De Armond 1, NWc SW 23-7-23w, sd 2178 ft. Neal et al's Johnson 1, SEc NE NW 3-7-22w, r 975 ft.

HUGHES COUNTY—Flescher Pet. Co.'s Smith 1, NWc NE NW 8-9-12, sd 3530 ft. W. J. Thurber's Foster 1, SEc SW SE 5-7-8, plug back to 1823 ft. Middle States Oil Co.'s Arn 1, NWc 13-16-11, stdr cas, td 3585 ft. Kingwood Oil Co.'s Hawkins 1, SEc NE 12-7-9, dr 3185 ft.

JACKSON COUNTY—J. D. Wade's No. 1, C SW NW 36-2-23w, dr 2690 ft. J. R. Abernathy's Snodgrass 1, C NW NW 15-1-23w, dr 250 ft.

JEFFERSON COUNTY—Shawver et al's Anderson 1, SEc NE 31-4-8w sd 1200 ft. Knight & Hines' Smith 1, SEc 31-4-9, dr 2110 ft. Landis et al's Standfield 1, SEc 33-7-6w, sd 1150 ft. Tarkington & Kelse's Cowden 1, SEc NW 32-29-2 rig.

KAY COUNTY—Otstot Dev. Co.'s Rohos 2, C NE NE SE 3-27-1, sd 3538 ft. Alcorn Oil Co.'s North 1, NEc NW NE 12-26-2, sd 1760 ft. T. B. Slick's Chism 1, SEc NW 32-29-2, sd 3508 ft.

KIOWA COUNTY—Connor et al's No. 2, NEc NW NW 34-7-16, sd 1548 ft. Aubyme Oil Co.'s No. 1, SWc NE 3-7-17w, rig.

LINCOLN COUNTY—Sun Ray Oil Co.'s Gallagher 1, C N L SE SE 18-13-5, fsh 2790 ft. Flynn & Morgan's Baker 1, SEc 2-14-5, dr 2730 ft. P. & R. Corp.'s Hainzig 1, SWc NW SW 14-13-6, sd 1290 ft. Douglas Oil Co.'s Ewing 1, NWc 7-13-13 sd 1943 ft. J. C. Cook's Richardson 1, SWc NE SW 8-12-5, r 630 ft.

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Eugene Costa et al's Dodrill 1, SEc NW 26-12-2, dr 890 ft.

LOGAN COUNTY—Buford-Brim Oil Co.'s Newman 1, NWc NE 32-19-3w, set 8-inch 2155 ft. Oklahoma Drilling Co.'s Johnson 1, SEc SW 36-15-2w, sd 1716 ft. Franklin Oil Assn.'s Moore 1, NWc SE SE 28-18-4w, dr 1500 ft. McMunn & Nixon's Fields 1, SWc NE SE 35-17-4w, sd. Haley & Pioneer Pet. Co.'s Quier 1, SWc SE 33-18-3w, rig rebuilt. Leright et al's Lair 1, C S L N½ SE 28-16-1w, sd 750 ft.

LOVE COUNTY—Wickenheiser et al's Beal 1, NEc SE 13-5-3, fsh 2815 ft. Drillers Syndicate Oil Co.'s Wilson 1, NWc NE 11-7-2, sd 2830 ft.

OKLAHOMA COUNTY—Firestone Oil Co.'s School 1, NWc SE 36-11-3, dr 2680 ft. Big Three Oil Co.'s Wild 1, SWc NE 31-11-2, sd 1390 ft.

PONTOTOC COUNTY—Harper et al's Dener 1, NWc SE SE 19-5-7, r 1650 ft. Smith et al's Norris 1, SWc SE 34-4-6, fsh 2430 ft. Riverside Oil Co.'s McFarland 1, NWc NE NW 4-5-5, 650 ft. Roy Carter's Burk 2, NEc SE SE 32-5-5, dr 3000 ft. C. J. Wrightsman's Floyd 1, SWc NW NE 24-4-4, bad hole at 530 ft. Craig et al's Starritt 1, NWc NE 5-4-5, sd 600 ft. Hughes et al's Falkner 1, C SW NE 2-4-7, dr 700 ft.

POTTAWATOMIE COUNTY — Ossie Oil Co.'s Howell 1, SWc NE 13-10-2, dr 2680 ft. Magnolia Pet. Co.'s Brandenberg 1, C SE SW NW 18-7-5 pb to 3590 ft. Davie Detrick's McGahey 1, SEc 10-6-2, dr 3370 ft. H. G. Guinup et al's Floyd 1, SWc SE 13-11-3, sd 3512 ft. North American Oil Co.'s Madgett 1, NWc 25-10-4, dr 510 ft. Maud Oil Products Co.'s Yinson 1, NEc NW 18-7-5, sd 2930 ft. McMan Oil Co.'s Neghan 1, SWc NW 12-7-4, sd 100 ft. Day Oil Co.'s Bell 1, SEc NW NE 2-5-3, dr 3450 ft, shows oil.

ROGER MILLS COUNTY—Twin Hills Oil McClure 1, NWc 15-15-26w, dr 2580 ft. Colorado Oil Co.'s No. 1, NE NE NE 32-16-22w, sd 2376 ft. Mutual Oil Co.'s No. 1, C NE NE NE 1-16-21w, dr 3450 ft. Trio Oil Co.'s No. 1, SEc NW SW 3-13-26w, sd 3036 ft.

SEMINOLE COUNTY—Maxwell et al's Charty 1, C NE NW 36-6-6, r 1460 ft. Link Oil Co.'s Carolina 1, C SE NW 14-6-7, sd 2330 ft. T. B. Slick's Sanny 1, SWc 19-6-7, dr 2900 ft.

TILLMAN COUNTY — A. L. Spears's Couch 1, NWc NE SW 10-4-18w, sd 1590 ft.

WASHITA COUNTY—R. B. Hartman's Montgomery 1, NEc SW SE 32-9-17w, sd 3060 ft. McCoy et al's Pretters 1, C SW SW NE 9-8-15w, sd 3020 ft.

Louisiana Wildcats

Company, Well, Location—	Initial Production Bbls.	Depth
Caddo Parish—		
Brewer & Sewell's Sharp 1, 15-18-16	*	3005
Webster Parish—		
White Oil Corporation's Gleason 1, 31-22-9	*	3541

DRILLING REPORT

BOSSIER PARISH—Armistead et al's Bernstein 1, 11-20-13, sd 1180 ft. Atlantic Oil Prod. Co.'s Bodcau Lumber 1, 24-23-12, set 8¼ inch 2656 ft. Collins et al's Hamilton 1, 16-20-11, dr 50 ft. Estes et al's Bodcau Lumber 1, 15-23-12, to set tubing and packer at 2721 ft; showing oil, gas, and salt water. Standard Drilling Synd.'s Johnson 1 18-18-11, dr 940 ft. Standard Oil Co.'s McCloud 1, 13-19-11, dr 2010 ft.

CALDWELL COUNTY—Culver et al's Culver 1, 21-14-4e, dr 2115 ft.

CADDO PARISH—Ark-Caddo Oil Co.'s Nickerson 1, 30-19-15, dr 2275 ft. Caddo-Western Gas Co.'s Gardner-Blades 1, 2-16-15, set 6-inch 2668 ft. Collins et al's Levy 1, 23-19-14, sw 980 ft. Crude Oil Co.'s Alexander-Ledbetter 1, 27-16-14, set 4½ inch 3550 ft. Louis-

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iana-Texas Community Oil Co.'s McCoy 1, 16-23-16, dr 2550 ft.

CLAIBORNE PARISH—Arnet et al's Calhoun 1, 26-21-6, sd 1410 ft. Block O. & G. Co.'s Aubrey 1 20-21-8, sd 1610 ft. Collins & Woodley's Reynolds 1, 30-21-4, dr 2135 ft. Dixie Oil Co.'s Easter 1, 20-20-7, rig. El Dorado Chief Oil & Gas Co.'s Gandy 1, 36-22-7, dr 2610 ft. Forrest Oil Co.'s Fields 1, 22-19-5, dr 1550 ft. Standard Oil Co.'s Lloyd 1, 10-20-5w, dr 2390 ft. Triangle Drlg Co.'s Ferguson 1, 5-21-5, dr 1400 ft.

DE SOTO PARISH—Ulrey et al's Frost-Johnson 1, 3-11-15 sd 2761 ft; working on titles; claim show of oil and gas.

LA SALLE PARISH—Stovall Drlg Co.'s Louisiana-Central Lumber 2, 27-10-2e, set 8-inch 732 ft.

LINCOLN PARISH—Beckner et al's Barrett 1, 13-20-3w, dr 700 ft. McCauldin et al's Hudspeth 1, 28-20-4, dr 940 ft.

OUACHITA PARISH—Haynes O. & G. Co.'s Dixie 2, 17-17-3e, fsh 2850 ft.

RED RIVER PARISH—LeGrande et al's Fee 3, 2-14-12, set 8-inch 1742 ft.

UNION PARISH—Cargile et al's Heard 1, 25-21-3w, dr 1975 ft. Davidson & Palmer's Frost-Johnson A-1, 17-23-1e, sd 77 ft; Templeton 1, 18-23-1e, bldg dk. Feazel et al's Green 1, 19-23-1e, sd 80 ft. Gulf Ref's Co.'s Security Trust 2, 24-23-1w, dr 550 ft. Johnson et al's Pryor 1, 35-22-2w, to set 8-inch 1385 ft. Love & Clark's Frost-Johnson 1, 7-25-1e, coring 2256 ft. Neddo Pet. Investment Corp.'s Smith 2, 2-23-3w, sd 2480 ft.

WEBSTER PARISH—Morefield & Tanner's Pine Woods Lumber 2, 2-22-11, dk. Olmstead et al's Hudson 1, 17-19-19, sd 800 ft. Smitherman & McDonald's Boucher 1, 21-23-11, plugged back to 2703 ft. Stack & Egger's Bible 1, 8-20-9, sd 1938 ft.

WEST CARROLL PARISH—Arkansas Fuel Oil Co.'s Fiske 1, 8-21-10e, dr 175 ft. Orion Oil Co.'s Bain Wagon 1, 23-23-10e, set 8-inch 2884 ft.

TEXAS OIL MAPS

County and District Catalog on Application

HEYDRICK MAPPING COMPANY, Wichita Falls, Texas

Arkansas Wildcats

COMPLETION

Company, Well, Location—	Initial Production Bbls.	Depth
Ouachita County—		
Peltier et al's Eagle Mills 2, 25-13-16	*	2546

DRILLING REPORT

CALHOUN COUNTY — Arkansas Fuel Oil Co.'s Childress 2, 1-15-15 dk.

CLEVELAND COUNTY — Markle Synd.'s Plummer 1, 22-9-10, set 6-inch 2254 ft.

COLUMBIA COUNTY—Ark-Oil Co.'s Fullenwilder 1, 12-17-22, coring 2269 ft. Brown et al's Robinson 1, 23-18-23, sd 3034 ft. De Soto & Hickman's Fullenwilder 1, 3-16-21, sd 1090 ft. Houston Oil Co.'s Baker-Joinner 1, 2-18-22, r to set 10-inch 1618 ft. Johnson et al's So Relle 1, 18-17-22, sd 740 ft. Kemp et al's Emerson 1, 7-19-19, sd 630 ft. Miller et al's Watts 1, 20-16-18, sd 1990 ft. Neibert et al's Barge 1, 22-18-22 sd 1951 ft.

DALLAS COUNTY—Conway et al's Riggs-Matlock 1, 33-8-15, sd 1805 ft.

DREW COUNTY—Graves et al's Karnes 1, 10-13-6, milling 2170 ft. King & Wilson's Trotter 1, 12-13-6, sd 900 ft. Ratcliff et al's Spencer 1, 21-14-7, dr 1200 ft. Rhodes et al's Harris 1, 5-13-8, dr 1375 ft. Spooner et al's Meyer 1, 4-16-17, sd 50 ft.

GRANT COUNTY—Arnold & Hill's Milk 1, 8-4-12, dk tmbrs.

HEMPSTEAD COUNTY — Dudney et al's Spates 1, 19-12-27, sd 2000 ft. Hope Columbus Oil Co.'s King 2, 24-11-26, sd 2145 ft. Martin et al's Adams 1, 36-12-27, dr 2665 ft. Meyer et al's Nicholls 1, 17-11-25, sd 2980 ft.

HOT SPRINGS COUNTY—Smith Refining Company's Kilpatrick 1, 10-6-18, dr 540 ft.

LA FAYETTE COUNTY — Ken-Saw Pet. Co.'s Red River Lumber 1, 34-19-24, sd 2980 ft.

LITTLE RIVER COUNTY—Gaines et al's Thomas 1, 15-13-29, dr 2715 ft. Grote et al's Allen 1, 2-13-29, dr 2745 ft. Johnson et al's Hawkins 1, 10-11-31, dr 1315 ft. Red River Valley Oil Co.'s Taylor 1, 29-13-29, sd 2795 ft. Sullivan O. & G. Co.'s Ludlow 2, 32-11-32, sd 2600 ft.

MILLER COUNTY—Kress et al's Thompson 1, 33-14-28, sd 917 ft.

NEVADA COUNTY—Anderson & Edward's Eaves 1, 11-13-23, to set 8-inch 1050 ft. Dudley et al's Grayson-McLeod 1, 32-11-21, sd 1750 ft. Ken-Ark Pet Co.'s White 2, 11-13-21, sd 1110 ft. Miller-Burnham-Hawley Synd.'s Perry 1, 12-15-22, sd 565 ft. Prescott Oil Co.'s Henry 3, 10-12-20, sd 907 ft.

OUACHITA COUNTY—Eck & Boger's Criner 1, 21-15-19, dk. Peltier et al's Eagle Lumber 2, 25-12-16, dr 2280 ft.

UNION COUNTY—Berry et al's Union Saw Mill 1, 14-19-11, sd 875 ft. Bondurant et al's Turbeville 1, 9-18-12, sd 2150 ft. Humble Oil & Ref. Co.'s (Walber) Cordell 1, 1-18-14, testing gas 2534 ft. Jeter Trust's Burnside 1, 33-17-13 sw 3058 ft. Ray et al's Long 1, 28-16-14, sd 2171 ft. Starke et al's Little 1, 21-19-12 sd 2247 ft. Traffic Oil Co.'s Goodwin 1, 20-16-14, to deepen, 2975 ft. Terrell Trust's Teele 1, 11-19-12, r 2645 ft; to set 6¾-inch cas and test.

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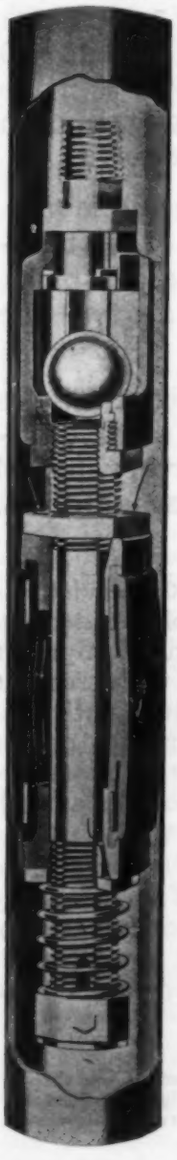

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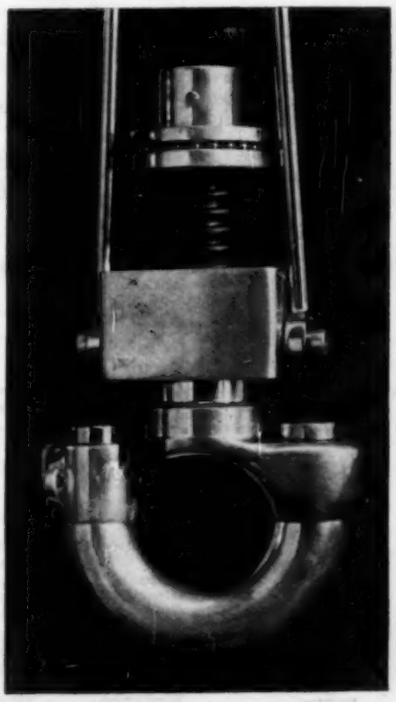

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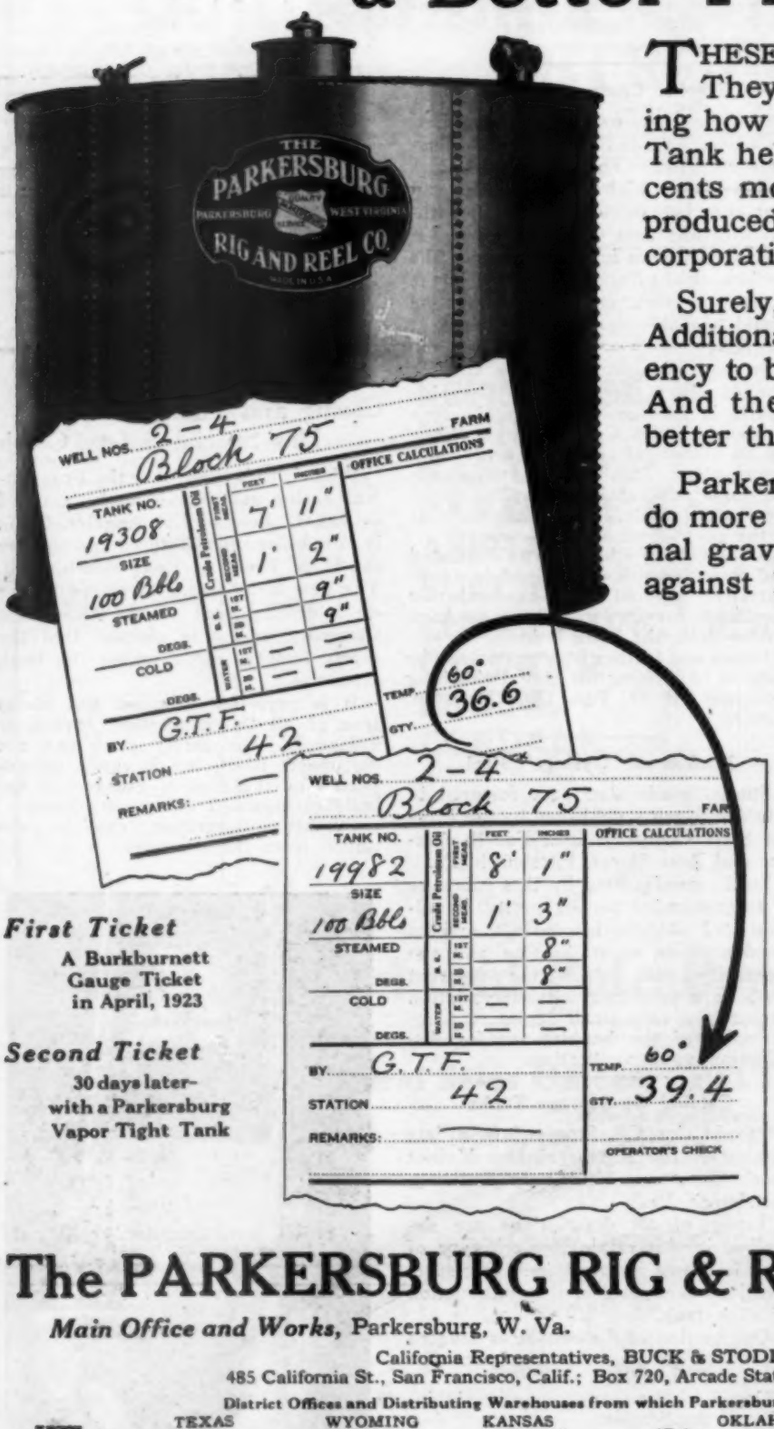

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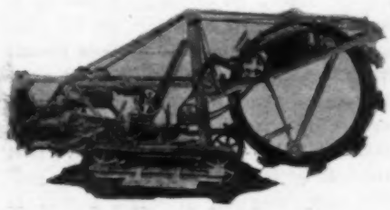
With the idea of furnishing a trenching machine, adaptable to all kinds of pipe line work, of as light design as possible and at the same time one that would be able to handle the heaviest of work, The Cleveland Trencher Company of 6715 Quinby Avenue,



Cleveland, Ohio, is now offering its "Baby Digger."

The machine is built with full caterpillar traction, according to the manufacturers, which enables it to do work over soft ground where heavier machines could not operate. The digging wheel is driven by a differential arrangement provided for the purpose of giving an even pull on both sides and thus assures a straight trench.

An automobile principle gear shift eliminates the necessity for changing sprocket chains for different speeds and also provides an instant means for securing the speed needed, it is claimed by the company.

Other claims of the machine are that due to a new arrangement which permits the clutch to slip and warn the operator when digger strikes an obstruction the danger of cutting underground pipes is eliminated, and operating costs are reduced to a minimum, one gallon of gas per hour being used to cut four feet of trench per minute.

The machine is practically of all steel construction, castings of special steel and roller and ball bearings throughout.

A. P. I. Fire Committee Meets at Los Angelees

Los Angeles, Calif., June 14.—A meeting of the Pacific Coast group of the American Petroleum Institute advisory committee for fire prevention and protection to life and property, of which Ralph J. Reed, chief engineer of the Union Oil Company of California, is chairman, was held in Mr. Reed's office in the Union Oil Building last week. The committee is cooperating with the National Fire Protection Association and the National Board of Fire Underwriters in revising the N. F. P. A. code, and the meeting was largely devoted to this work.

Organized two years ago by American Petroleum Institute through the instrumentality of Mr. Reed and the late J. C. Fitzsimmons, general sales manager of the Standard Oil Company of California, who foresaw a growing need for it, the advisory committee is composed of 25 representatives in five divisions, the Pacific Coast, Rocky Mountain, Mid-Continent, Southern and Eastern.

Mr. Reed succeeded to the chairmanship of the Pacific Coast division on the death of J. C. Fitzsimmons. Associated with Mr. Reed and appointed with him by the Pacific Coast directors of the Institute to represent the oil industry on the coast, are H. H. Hall, chief engineer, of the Standard Oil Company of California; S. J. Dickey, chief engineer, General Petroleum Corporation; L. D. Jurs, chief engineer, Associated Oil Company, and W. Hagenbach, engineer of the Shell Oil Company.

D. & B. Pump Booklet

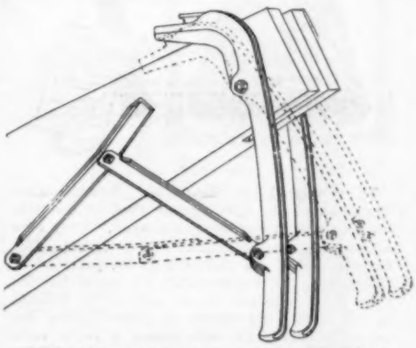
A treatise on deep well pumping that is well worth reading is contained in a small booklet issued by the D. & B. Pump and Supply Company, 301 West Ave. 26, Los Angeles, Calif., and any oil man with pumping troubles can have a copy of the booklet by writing to above address or applying to supply houses handling D. & B. equipment. The entire subject of pumping is gone into at some length and detail. Usual troubles had in pumping wells of all depths are mentioned and advice given.

Geo. N. McGarvey of Los Angeles, who has been a field salesman for the Associated Supply Company for some time, has resigned that position to handle outside sales for J. P. Ratigan in California. Mack not only changed his job June 1 but during the month will take unto himself a June bride, thus gaining a new boss who will probably be able to assist Mr. Ratigan in keeping him on the job.

TOMMY COCKRAN
Salesman for the Boykin Machinery and Supply Company at Wichita Falls, Texas, as he looked after grabbing one of the much desired cups in a recent golf tournament.

Rex Walking Beam Yoke Has New Collapsible Feature

A decided improvement has recently been worked out and applied to the Rex walking beam yoke, being marketed by Rex Tools, P. O. Box 1695, Houston, Texas.



The improvement consists of a collapsible feature that makes it possible for the yoke to be swung back out of the way when pulling rods. Before this feature was worked out the yoke interfered with rod pulling because it protrudes beyond the end of the walking beam, and it was made fast. With the collapsible arrangement the yoke is easily swung back until there is plenty of clearance for the rods.

Much favor has been gained by the Rex walking beam yoke since its introduction in the fields. The yoke is designed for either long or short strokes and the manufacturers claim that the yoke is economical for either type stroke. The pull is straight up on the polish rod so that the rod moves up and down in a true vertical line. This prevents wear on the polish rod and makes the packing in the suffing box last much longer than it would otherwise. The vertical pull also eliminates wear on the end of the beam, and stops leakage from the stuffing box.

The yoke is easily and quickly bolted to the beam without any fitting to or cutting of the beam.

Cable tools can be used on the beam without removing the yoke.

The standard yoke takes care of strokes up to 5 feet, and yokes for longer strokes can be furnished on request.

This equipment is being used in Oklahoma, Kansas, Louisiana, Arkansas, and California.

Further information can be obtained by writing Rex Tools, P. O. Box 1695, Houston, Texas.

Columbian Tank Booklet

"The Columbian," for spring, 1924, has recently been publishd by the Columbian Steel Tank Company, 1405-1625 West Twelfth Street, Kansas City, Missouri.

This bulletin is devoted to Columbian tanks, with special emphasis placed on the Columbian lap joint deck, and Columbian pressure flow tank valves.

Copies may be secured by writing the company.

The OIL WEEKLY will print on this page data on new oilfield equipment, improvements on old equipment, news of new catalogs, bulletins, etc. This department is handled exclusively by the editorial department and has no connection with the advertising department. Data will be carried on anything which the editorial department thinks of interest to our readers, regardless of whether or not the manufacturer is an advertiser in The OIL WEEKLY.—Publisher.

LETTERS OF Paul Peebles P.S.G.

The expected has happened. Another contender enters the lists against Paul in the contest for the fair Cleopatra's hand. The constancy of the estimable and versatile Mr. Peebles during the visitudes of the past ten or fifteen years of his eventful life could but inspire the admiration of the lady of his dreams, in the minds and hearts of others seeing domestic felicity. So here comes a letter from an ardent swain whose tactics must prove distasteful to Paul.

—The Editor.

Dallas, texas

Dear Cleopater;

Fur some time sence I been readin the junk this here Paul Peebles is writin you without no apparent complaint, and jest concluded you are either dummer than him if possible er else plum keerless in pickin friends.

I knowed this Peebles sence him and me was squeak high and ever sence he hez sacerfized and otherwise made fools of a lot of chuck heded wimmen, taken advantage of his kursed pulkritoodinusness an oily tung. All I got to say is he aint no good and ef I attempted to tel in these lines all I cood there wood be more inditements from the post offus then the hull legal profeshun of ft Werth could handel in yeers.

As to hiz bean a jolegist ha, ha! The burd cuddent find oil on the Humbels tank farm at powell with a order from ol man farish hisself. mr. Dudley that prints this papur is been nurvus fer sum time about the stuff paul puts out and appinted me investigatur an i'm hear to tell you I been detektin stuff and lies on him—on paul not dudley—that wud hang you an me both ef we got caught.

i been on his trail and he better watch his hole card. deep skandels involvin high places like pike speak iz common in his long and villanous kerear and despit hiz smuthe tung an slick city ways jestis is ny. i hope he reads this here and without wantin to start no rookus i feel it is my duty to ekspose him which will be dun 4th with unles he kicks in with the ten dolers he taken frum me in denver with a kold dek, lackin which i herebuy throws defians in his teeth. He ken reach me eny time genrel dely hear unless he perfers to be branded the low trikster he is an wear a badg of shame the ballens of his daze he will appear fur the cussin wich is cummin to him.

Now cleopater, i dont want that you er the intelligent reedrs of this steamed jernul shud impuke my motives, ner neither am I honin to start no newzpaper argymint jest fur a littul publicity but after readin the abuv if you decid frum my manly stile thet yu been mistaken in this here peebles miskreaunt let me no thru the Oil weakly and my gallent natur will prompt me to leav my wife and two children as also this pumpin job to cum to yure arms.

This dam lease aint makin nothin now ennyhow as after proratin the runs and payin the texas co storag charges, with incum an state taks there aint much left to take keer of liens an what all. so i will weight all ackwiver to heer yure sweet signul of surrender ere I spede me to yure vergun arms.

Our wommenhood must be pertekted at all hazzerds iz my moto. an if this peebles stiff dont pick up the gantlet i done throwed in his teeth he aint no wise werthy of yore sweat trust. He iz nawt but a white hed suppel cur.

I has the honer to describe miself

bo brummel.

mi deer cleopatry

well cleo hunny I shore am glad yu had the good sents 2 send me that there letter whitch that pusylannymuss low down crosseyed lartern jawed bowlegged boxankled lyin hippercrit son of a gun ritten 2 yu from dallas. i gess he noed that yu wood send it 2 me & he thunk that yu wood mabe beleev the lise whitch he tells yu & that yu wood think that because I did not go rite up 2 dallas & giv him the beetin up whitch he so ritchly deserves that yu wood think that he is tellin the truth & that I am skarred of him.

well hunny I am not goin up there 2 hunt for him but he aint goin 2 git away with nuthin like that because I am goin 2 show yu what a low down dirty trick they are tryin 2 play on yu & me. It aint no sutch a person as he sines his name but it is a feller whitch I allus thort was a frend on mine whitch is tryin 2 help out 1 whitch I no aint. & yu will sea that I no what I am talkin about when I git threw tellin yu.

it aint nuthin but a skeem of that onnery slim 2 git me & yu broke up & he is gittin red 2 help him do it. slim aint got sents enuff 2 to do it bi hisself because he cant even rite, but he must a paid red sumthin 2 do it for him because red is kinder sore at me for takin that 10$ offen him in denvr that time & he is the onliest 1 that I gotten ennything off of when I was in denver because everyboddy elst that I went up agenst out there cleaned me escept the land lady whitch had a good lookin dauter whitch sne thought I was stuck on & let me git behind with mi bord. I am goin 2 send her the munny sum times when I git it if I can remember her name.

hunny yu jest let that letter be a good lessen 2 yu. it shows yu that men aint 2 be trusted escept me which is allus trew 2 yu. & dont yu pay no attenshun 2 what he sed about me & wimmen. It is a big lie, hunny, & ennyway I cant help it if I hav waze with wimmin. If I ever fooled 1 it was on account of herself and because I cant hav nuthin mutch 2 do with them on account of yu, hunny.

I gess I ort 2 go up there & beet him up just on jenrel prinsipuls, but I aint got time 2 hang around the post offise waiting for a feller I never seen 2 cum for his male, & ennyhow I wood not want 2 beet up red for playin a littel pracikal joak on me like that because we are good frends & ennyhow I tried it wunst.

honest, now, hunny, I want 2 ast yu if yu think it wood be rite for you 2 have annything 2 do with a guy whitch has already got a wife & 2 children, unlessen mabe yu write him 2 cum on down & let me git him arested whitch he ort 2 be. ennyhow it shows yu hunny that he is onnery & low down, so dont yu hav nuthing 2 do with him. enny man whitch wood desert his wifes and child is 2 pusylannymus for yu 2 soil yore hands even openin a letter from him. an all of what he says about mi ability & mi caracter is foundashun on jeelusy and it aint no use for ether of us 2 pay him anny mine.

Hunny I am shore goin 2 cum down 2 sea yu write away soon even if evrything has 2 go 2 smash in mi bizness whitch aint bin so good in the last few days but what I am espectin it 2 be more better soon.

Rite 2 me hunny & say that no lires like that feller whitch rote 2 yu can shake yore confredents in yore own trew luvver.

Paul

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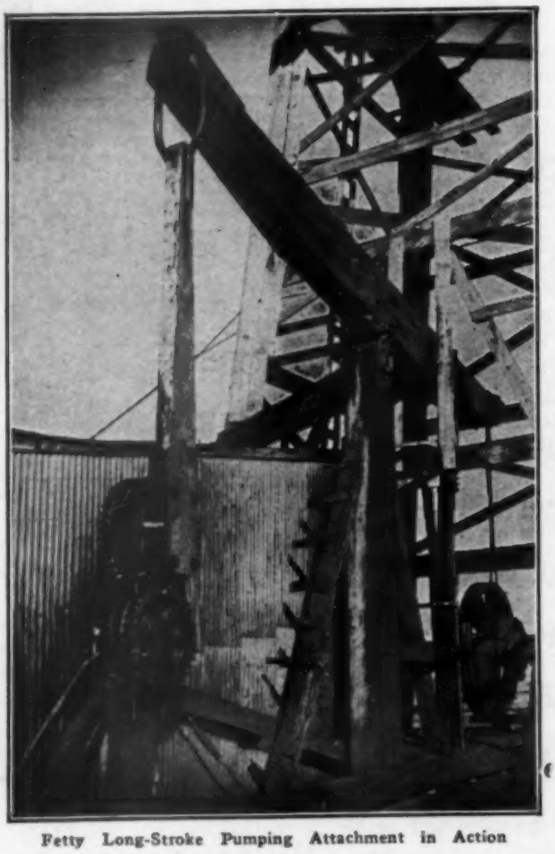
More Oil from the Same Well at Less Cost

This Can Be Done With a Fetty Long Stroke Pumping Attachment



Fetty Long-Stroke Pumping Attachment in Action

By installing the Fetty Long-Stroke Pumping Attachment some of the largest companies in the field have increased production from pumping wells and at the same time appreciably reduced operating expenses and brought about a saving in money.

More oil from the same well at less cost. That's added income.

Geared 2 1/9 to 1, the Fetty Attachment will handle more fluid, requires less power to operate, gives an even stroke and reduces rod trouble, in some instances almost entirely eliminating it.

Built to handle a 5-foot stroke with ease, the Fetty Long-Stroke Pumping Attachment is especially recommended to handle wells with 4-inch and 5-inch tubing. Will handle any size tubing.

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Arkansas Fuel Oil Co.
The Pure Oil Co.
The National Refining Co.
Tri State Oil Co.
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When properly installed the Fetty Long-Stroke Pumping Attachment is virtually fool-proof.

We solicit inquiries from those interested in increasing production and reducing operating costs.

C. C. FETTY & COMPANY

P. O. Box 1162, Eldorado, Kansas

Say you saw it in The Oil Weekly

SQUEAKS from the BULL WHEEL

And Nothing Happened

Nurse—Do you know what happens to little girls who tell fibs?

Betty—Ho! You can't scare me, I've already told three fibs in my lifetime.—Judge.

Far Worse

"It must be a terrible thing when an opera singer realizes that he has lost his voice."

"Yes, it is, but it is much more terrible when he doesn't realize it." — Santa Barbara News.

Father—When George takes you home next time you must bid him good-night at once.

Daughter—Why, dad? I'm sure we are always very quiet.

"Yes, but the silence is oppressive."—Yale Record.

Proud Father—That is a sunset my daughter painted. You know, she studied painting abroad.

Student—Ah! That explains it. I never saw a sunset like that in this country.—Boston Beanpot.

Servant—There's a man to see you, sir.

Master—Tell him to take a chair.

"He has, sir. He's taken them all, and they're moving out the piano now. He's from the furniture store."—Dartmouth Jack o' Lantern.

Q. E. D.

Feminist—We believe that a woman should get a man's wages.

Married Man—Well, my wife does.—London Answers.

Impulsive

"That's a beautiful black eye you have."

"Yes; I should have asked her first."—Judge.

Dilemma

"Suppose I kill myself for you?"

"Oh, don't do that, my dear! A man who would take his own life is unworthy of living."—Paris Sans-Gene.

Helpful Sister

She—Yes, I have for some time known that you love me.

He—Dare I hope that it is your feelings that have told you so?

She—No, it's your sister.—Smart Set.

Come Seven!

"I ain' nevah gwine t' shoot craps wid Gus no mo' unless I got my own dice."

"Why," asked a comrade, "am Gus' dice loaded?"

"No, but mine is."

Sad Words

"See that woman over there?"

"Yes, what about her?"

"Well, if it hadn't been for three words she said ten years ago, I would be as wealthy as Croesus now!"

"Delightful situation. Go ahead with the tale!"

"Well, her father owned all the safety-pin plants in the country and the family was just rolling in wealth. And with all her riches she was mean enough to deprive me of my chances of making ten million dollars at a blow! Imagine!"

"What's the rest of the dope? What are the famous three words?"

"Why, I was going to marry her and then all her millions would have been mine but—"

"But what?"

"But when I asked her to be mine she said 'No, you fool.'" —Amherst Lord Jeff.

Blinks—Where can you find the truth these days?

Jinks—About half way between how fast he tells the judge his car can go and how fast he tells his friends it can go.—Brooklyn Eagle.

"I can't stay long," said the chairman of the committee from the colored church. "I just came to see if yo' wouldn't join de mission band."

"Fo' de lan' sake, honey," replied the old mammy, "doan' come to me. I can't even play a mout-organ."—Lippincott's

Dorine—Why were you so angry with Jack at the dance last night?

Corine—Well, I said I was barely able to come, and—

"And what?"

"And he said, 'Yes, so I see.'" —Massachusetts Ag. Squib.

"So, you've come home, have you?" queried Blank's wife, when he strolled in at 3 in the morning.

"Yes, dear, glad to see you," admitted Blank. "I had an idea I might run across you here."—Washington Sun Dodger.

Eve said to Adam: "Dear, which shall I wear to the party tonight, my maple leaf or my fig leaf?"

Adam said: "You'd better wear your poison ivy; it's going to be a rough party.—Arizona Who Doo.

Jim—I hear Tom got the Carnegie medal with special mention for saving a person from drowning.

Jam—Yes. Why the special mention?

"The person was his wife."—Pennsylvania State Froth.

Flapper—I don't see why they couldn't change the style without making the skirts longer.

Philosopher—My dear, when one changes one's clothes one always lowers the shades.—Harvard Lampoon.

He Was Still in the Running

An "eating competition" was organized in a mining town in the north of England. One competitor, a giant collier six feet in height, and broad in proportion, succeeded in disposing of a leg of mutton, a plentiful supply of vegetables and a plum pudding, washed down with copious draughts of ale. He was unanimously declared the winner, and was being triumphantly escorted home when he turned to his admirers and said:

"Eh, lads, say don't thee say nowt of this to my old woman, or she won't gie me no dinner!" —Argonaut.

Autumn Stuff

Friend: The air is like wine!

Prohibitionist: I shall have to report that fact to the enforcement officials at once!

Upside Down

Mrs Brown—"I admire Dr. Young immensely. He is so persevering in the face of difficulties that he always reminds me of Patience sitting on a monument."

Mr. Brown—"Yes; but what I am becoming rather alarmed about is the number of monuments sitting on his patients."

Just in Time

Mose—"Dat nigger shure am lucky."

Rastus—"How come, how come?"

Mose—"When he saw the Ku Klux coming after him he turned white.

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Bridgeport Machine Co.
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Regan Forge & Engineering Co.
Republic Supply Company
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Sullivan Machinery Co.

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Continental Supply Company
Rotary Disc Bit Co.

Ditchers—
Buckeye Traction Ditcher Co.

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Continental Supply Company

Drilling Machines—
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Parkersburg Rig & Reel Co.
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Continental Supply Company

Drill Pipe Cutting—
Baash-Ross Tool Company

Drilling Tools—
Baash-Ross Tool Company
Continental Supply Company

Drill Pipe—
Continental Supply Company
Frick-Reid Supply Co.
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Drilling Equipment—
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Baash-Ross Tool Company
Bridgeport Machine Co.
Continental Supply Company
Republic Supply Company
Western Supply Company

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Continental Supply Company
Bessemer Gas Engine Co.
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Graver Corporation
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Samuel J. Caudill
Alexander Deussen
David Donoghue
Edwin B. Hopkins
Foster & Reiter
Geo. C. Matson
L. H. Owen
Herald Bros.

Grips and Clamps—
Continental Supply Company
J. P. Ratigan
W-K-M Co.

Heat Exchangers—
Borwn Welding & Machine Co.

Hoists—
Alamo Iron Works

Hose—
Continental Supply Company
D. F. Connolly Agency

Houses—
Crain Ready-Cut House Co.

Hydrometers—
The Braun Corp.

Laboratory Equipment—
Continental Supply Company
Fort Worth Laboratories

Lease Equipment—
The Braden Co.

Lighting Systems—
Bridgeport Machine Co.
Continental Supply Company
R-F Electrical Mfg. Co.
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Company
Republic Supply Company
Reading Iron Co.
Superior Tube Co.

Manufacturers—
Robinson Packer Co.

Maps—
Heydrick Mapping Co.
Standard Blue Print, Map & Engineering Co.

Meters—
Continental Supply Company
The Foxboro Co., Inc.

Motors—
Westinghouse Elec. & Mfg. Co.

Oil Field Supplies—
American Steel Rig & Reel Co.
American Well & Pros. Co.
The Braden Co.
Bridgeport Machine Co.
Butler Mfg. Co.
Continental Supply Company
D. F. Connolly Agency
The Cunningham Company
C. C. Fetty & Co.
Frick-Reid Supply Co.
Graver Corporation
Gulf Coast Mach. & Sup. Co.
Erle P. Halliburton
International Supply Co.
Kansas City Struct. Steel Co.
Lee C. Moore & Co.
Lucey Manufacturing Corp.
The National Supply Cos.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company
Regan Forge & Engineering Co.
Robinson Packer Co.
H. M. Spence
Smith Separator Company
Southern Brass Mfg. & Plating Co.

GUIDE FOR PURCHASERS—Continued

Oil Field Supplies—(Cont.)
Superior Tube Co.
United Iron Works, Inc.
W-K-M Co.
Western Supply Company

Oil Stills—
The Braun Corp.

Oil Thieves—
The Braun Corp.

Oilwell Casing—
Continental Supply Company
Frick-Reid Supply Co.
Republic Supply Company
Superior Tube Co.
Texas Pipe & Supply Co.

Oil Well Cementing—
Erle P. Halliburton

Overshots—
Baash-Ross Tool Co.
Continental Supply Company
LeBus Rotary Tool Works

Packers—
Continental Supply Company
The Guiberson Corp.
Layne & Bowler
Robinson Packer Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Western Supply Company
W-K-M Co.
Exner-Dodge Packer Co.

Packing—
Continental Supply Company
D. F. Connolly Agency
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company

Paints—
Continental Supply Company
Peden Iron & Steel Co.

Panel Boards—
Westinghouse Electric & Mfg. Co.

Patents—
Hardway & Cathey
Jesse R. Stone

Pipe Grips—
Continental Supply Co.
W-K-M Co.

Pipe—
A. M. Byers Co.
Continental Supply Company
W. E. Detlor
Frick-Reid Supply Co.
F. W. Heitmann Co.
Harrisburg Pipe & Pipe Bending Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Republic Supply Company
David L. Schofield
Superior Tube Co.
Standard Seamless Tube Co.
Williamsport Wire Rope Co.

Pipe Screwing Machines—
California Pipe Line Machine Co.
Buckeye Traction Ditcher Co.

Pipe Wrenches—
Continental Supply Company
Dunn Mfg. Co.
The Guiberson Corp.
LeBus Rotary Tool Works
Republic Supply Company

Plunger Rotor
Sargeant Engineering Co.

Polish Rod Grips—
Sargeant Engineering Co.

Portable Buildings—
Butler Mfg. Co.
International Derrick & Equipment Company

Portable Compressors—
Continental Supply Company
Sullivan Machinery Co.

Portable Drilling Rigs—
Bridgeport Machinery Co.
Continental Supply Company
Lee C. Moore & Co.
Oil Well Service Co.
Parkersburg Rig & Reel Co.
The National Supply Cos.

Pullers—
Davis & Kuhns

Pulleys—
Continental Supply Company
Davis & Kuhns
International Derrick & Equipment Company
Lee C. Moore & Co.

Pulling Machines—
Clark Machine Co.
Continental Supply Company
Iron King Mfg. Co.
Myrick Machine Co.
Safety Pulling Machine Co.

Pumps—
Axelson Machine Co.
American Well & Pros. Co.
Bradford Motor Works
Continental Supply Company
D. & B. Pump & Sup. Co.
C. C. Fetty & Co.
Frick-Reid Supply Co.
Gaso Pump & Burner Mfg. Co.
Goulds Manufacturing Co.
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Company
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.

Pumping Powers—
The Braden Co.
Continental Supply Company
C. C. Fetty & Co.
Frick-Reid Supply Co.
Foster-Hoefer Corp.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Co.
H. M. Spence

Refined Products—
Gulf Refining Company
Humble Oil & Refining Co.
Sinclair Refining Co.
Sunshine State Oil & Ref. Co.

Recorders—
Fort Worth Laboratories
The Foxboro Co., Inc.

Refinery Equipment—
Butler Mfg. Co.
Continental Supply Company
Gardner Governor Co.
Graver Corporation
Kansas City Struct. Steel Co.
Oil Conservation Engineering Co.
Republic Supply Company
Smith Separator Company
Titusville Iron Works
United Iron Works, Inc.
Wyatt Metal & Boiler Works

Rig Building—
Producers Lumber Co.

Rig Irons—
Continental Supply Company
International Supply Co.
Lee C. Moore & Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Company

Rig Timbers—
D. D. Wertzberger

Rotary Rock Bits—
Continental Supply Company
Hughes Tool Co.

Rotary Fish Tail Bits—
Continental Supply Company
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
W-K-M Co.

Screens—
Pacific Oil Tools Co.

Sectional Steel Buildings—
The Braden Co.

Separators—
Butler Mfg. Co.
Continental Supply Company
Smith Separator Company
Trumble Gas Trap Co.

Standing Valve Puller—
Sargeant Engineering Co.

Structural Steel—
Butler Mfg. Co.
Kansas City Struct. Steel Co.
Pennsylvania Tank Car Co.
United Iron Works, Inc.

Steel Derricks—
Continental Supply Company
International Derrick & Equipment Company
Lee C. Moore & Co., Inc.
Superior Tube Co.

Steel Crown Blocks—
Continental Supply Company
Gulf Coast Mach. & Sup. Co.
International Derrick & Equipment Company
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Manufacturers—
Colonial Steel Co.

Steel Storage Tanks—
Butler Mfg. Co.
Continental Supply Company
Graver Corporation

Strainers—
Continental Supply Company
Layne & Bowler Co.
Pelican Well Tool & Supply Co.
J. H. McEvoy & Co.
W-K-M Co.

Sucker Rod Lines—
D. F. Connolly Agency
Continental Supply Company

Sucker Rods—
Axelson Machine Co.
Continental Supply Company
D. & B. Pump & Sup. Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Cos.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Company

Sucker Rod Sockets—
Bradford Motor Works
Continental Supply Company
Brown Welding & Machine Co.

Swabs—
Continental Supply Company
The Cunningham Company

Tank Bolts—
Continental Supply Company
Steel Mfg. & Warehouse Co.

Tanks—
American Tank Co.
Butler Mfg. Co.
Black, Sivalls & Bryson
Columbian Steel Tank Co.
Continental Supply Company
The Brownell Co.
Gantz Tank Co.
Graver Corporation
Kansas City Structural Steel Co.
Maloney Tank Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works
Pittsburgh-Des Moines Steel Co.
United Iron Works
Wyatt Metal & Boiler Works

Tank Equipment—
Continental Supply Company
Oil Conservation Engineering Co.

Tank Gauge Engineer—
L. M. Hall

Temper Screws—
Burns Tool Co.

Tret-O-Lite—
W. S. Barnickel & Co.

Thermometers—
Continental Supply Company
Fort Worth Laboratories
The Foxboro Co., Inc.

Tongs—
Bridgeport Machine Co.
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corp.
LeBus Rotary Tool Works
Pelican Well Tool & Supply Co.
Wilson & Willard Mfg. Co.
W-K-M Co.

Tool Joints—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Bridgeport Machine Co.
Continental Supply Company
Hughes Tool Co.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Tools (Fishing and Drilling)—
Bridgeport Machine Co.
Brown Welding & Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
Sullivan Machinery Co.
Western Supply Company
W-K-M Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
American Steel Rig & Reel Co.
Rock Island Plow Co.

Traveling Blocks—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Continental Supply Company
Gulf Coast Machine & Sup. Co.
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tubing Catcher—
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corp.

Tubing Lines—
Continental Supply Company
D. F. Connolly Agency

Tubing—
Continental Supply Company
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Underreamers—
American Well & Pros. Co.
Bridgeport Machine Co.
Continental Supply Company
Western Supply Company
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Continental Supply Company
Sullivan Machinery Co.

Valves—
Bradford Motor Works
Continental Supply Company
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co.
Ludlow Valve Mfg. Co.
Oil Conservation Engineering Co.
Pratt & Cady
Reading Steel Casting Co.
Reading Valve & Fittings Co.
Smith Separator Company
Southern Brass Mfg. & Plating Co.
Westcott Valve Mfg. Co.
W-K-M Co.

Valves and Fittings—
Continental Supply Company
Darling Valve & Mfg. Co.
D & B Pump & Sup. Co.
F. W. Heitmann Co.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pratt & Cady
Republic Supply Company
Reading Steel Casting Co.
Reading Valve & Fittings Co.
United Iron Works
W-K-M Co.

Walking Beams—
Continental Supply Company
Internaitnal Derrick & Equipment Company
Lee C. Moore & Co., Inc.

Welding and Cutting Equipment—
Continental Supply Company
Imperial Brass Mfg. Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Company
D & B Pump & Sup. Co.
Foster-Hoefer Corp.
Republic Supply Company
The Charles N. Hough Mfg. Co.
Southern Brass Mfg. & Plating Co.
Texas Oil Pump Co.

Water Gauges—
Continental Supply Company
J. E. Shaffer Co.
F. W. Heitmann Co.

Water Cans—
Continental Supply Company
H. P. Gott Mfg. Co.

Wire Line Clamps—
Western Supply Company

Wire Rope—
Bridgeport Machine Co.
D. F. Connolly Agency
Continental Supply Company
Houston Oil Field Material Co.
International Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
The National Supply Cos.
Williamsport Wire Rope Co.

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